

On the crab spiders (Araneae: Thomisidae) of Mongolia, with notes on the species collected during the 2000 Polish expedition

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ABSTRACT. The crab spiders of Mongolia remain well known, with 42 species being recorded to date. Two species, *Ozyptila atomaria* and *Ozyptila orientalis* are recorded from Mongolia for the first time.

KEY WORDS: Thomisidae, Mongolia, distribution, new records.

INTRODUCTION

Mongolia in regards to its varied habitats was often a place of arachnological exploration in the past. First faunistic data on the crab spiders were published in SIMON (1895) and SCHENKEL (1936). Above authors described four species of crab spiders new to science (*Thomisus grubei* SIMON, 1895 [now *Misumena grubei* (SIMON, 1895)], *Xysticus hedini* SHENKEL, 1936, *Xysticus sjoestedti* SCHENKEL, 1936 and *Xysticus soederbomi* SCHENKEL, 1936. Later LOKSA (1965) studied material collected by Z. KASZAB during expedition to Mongolia (mostly to its central regions). He determined 91 species, including 11 crab spiders, of which 11 species were new to science and 44 new to the area.

Despite incomplete faunistic data on the crab spiders of Siberia and the Russian Far East, LOGUNOV & MARUSIK (1994) provided a synopsis of the thomisid fauna of the mountains of south Siberia, mostly on the basis of the material collected by Logunov and those of the Siberian Zoological Museum in Novosibirsk.

These authors listed 48 species of the crab spiders (LOGUNOV & MARUSIK 1994) and also provided remarks on some species' distribution in Mongolia. In the same year, LOGUNOV (1994) described a new species, *Xysticus idolothytus* LOGUNOV, 1994, also recorded from northern Mongolia. Later, *Xysticus austrosibiricus* LOGUNOV et MARUSIK 1998 was described from the mountains of south Siberia and Mongolia (LOGUNOV & MARUSIK 1998). The latter was mistakenly reported from Mongolia by LOKSA (1965) under the name *X. viduus* (see LOGUNOV & MARUSIK 1998).

Of the 190 spider species collected from central Mongolia during the American-Mongolian ornithology expedition (Ulaanbataar – South Gobi Aimak – Khangai Mountains) (see MARUSIK & LOGUNOV 1998), 23 species belonged to Thomisidae of which 12 were first recorded from Mongolia; *Runcinia tarabayevi* MARUSIK et LOGUNOV, 1990 was the only species of the genus new for Mongolia.

Despite more intensive taxonomic studies conducted on the crab spiders of Central Asia, this fauna remains poor known. AZARKINA & LOGUNOV (2000) described a new species, *Xysticus pseudocristatus* AZARKINA et LOGUNOV, 2000, from the mountains of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Russia, Mongolia). This species is closely related to *X. audax* (SCHRANK, 1803), *X. cristatus* (CLERK, 1757), *X. thessalicus* SIMON, 1916 and *X. promisculus* O. P.-CAMBRIDGE, 1876. Later, LOGUNOV et al. (2001) undertook a comparative study on *X. lineatus* (WESTRING, 1851) and described a new species *X. wunderlichi* LOGUNOV, MARUSIK et TRILIKAUSKAS, 2001 from southern Siberia and northern Mongolia. Two more species, viz. *Ozyptila kaszabi* MARUSIK et LOGUNOV, 2001 and *Tmarus gajdosi* MARUSIK et LOGUNOV, 2001 were described from Mongolia (MARUSIK & LOGUNOV 2001). A revisional study was conducted on *Ozyptila inaequalis* (KULCZYŃSKI, 1901) and a replacement name was suggested for *Xysticus laticeps* SCHENKEL, 1963 (now *X. gobiensis* MARUSIK et LOGUNOV, 2001). *X. gobiensis* and *X. seserlig* LOGUNOV et MARUSIK, 1994 were recorded from Mongolia for the first time (see MARUSIK & LOGUNOV 2001).

Recently, MARUSIK & LOGUNOV (2006) examined the material collected by Z. KASZAB during his expeditions (1966-1969) to Mongolia. Their study revealed 23 thomisid species, of which two were new to the fauna of Mongolia: *Diaea suspiciosa* O. PICKARD-CAMBRIDGE, 1885 and *Xysticus soederbomi* SCHENKEL, 1936.

A list of species of crab spiders have been shown on Table 1.

MATERIAL

Scientific fieldworks in central and northern Mongolia took place during the period of 18 July 2000-04 August 2000. Field trips were conducted in three regions: Arkhangai Aimak, Khövsgöl Aimak and Bulgan Aimak. Spiders were collected by sweeping with a net of grasses, low plants and by beating bushes and lower branches of trees. Some 80 samples, including 20 samples of the crab spiders (108 specimens), were collected from seven locali-

ties. 90 juvenile specimens were identified to a genus level (*Xysticus* sp. – 71 specimens, *Misumena* sp. – 13 specimens, *Heriaeus* sp. – 5 specimens, *Thomisus* sp. – 1 specimen). All specimens were collected by P. SZYMKOWIAK.

Study sites

- I. Arkhangai Aimak, surroundings of Horgo, Terkhiin Tsagaan Nuur National Park, near Horgo volcano, (48°10'N, 99°48'E), 2200 m a.s.l., 20 July 2000, SW exposition, larch forest (*Larix sibirica*) with *Alium* sp. and *Saxifraga* sp. in the vicinity of the volcano.
- II. Arkhangai Aimak, surroundings of Horgo, Terkhiin Tsagaan Nuur National Park, (48°10'N, 99°49'E), 2080 m a.s.l., 18 July 2000, surroundings of lava field at the base of volcano, larch forest, shaking the twigs of *Larix sibirica*.
- III. Arkhangai Aimak, Terkhiin Tsagaan Nuur National Park, Tarvagatain Massif, (48°11'N, 99°47'E), 2600 m a.s.l., 19 July 2000, xerophilous grassland near small mountain pond.
- IV. Khövsgöl Aimak, Khövsgöl Nuur National Park, approx. 15 km N from Hatgal (=Cechy), (50°35'N, 100°11'E), 1650 m a.s.l., 25-30 July 2000: 1. Crowns of larch forest; 2. Larch forest, under the stones and in litter; 3. Spiders with egg-sacs from the litter and sitting on the flowers; 4. Edge of the larch forest; 5. Edge of larch forest, epigeic fauna.
- V. Khövsgöl Aimak, Khövsgöl Nuur National Park, approx. 25 km N-NW from Hatgal (=Cechy), main edge of Khoridol Saridag Mountains, (50°40'N, 100°08'E), 2400 m a.s.l., 28 July 2000, under stones, 1750-2400 m a.s.l.
- VI. Bulgan Aimak, 4 km N of Bugat (approx. 23 km N from Bulgan), N edge of Bureijn Mountains, lowland between two mountain ranges, (49°03'N, 103°38'E), 1300-1358 m a.s.l., 3-4 August 2000: 1. Mountain meadow in close vicinity of loose larch trees with some birches, herbal layer; 2. Edge of larch forest; 3. Mountain meadow in close vicinity of loose larch trees and some birches; 4. Mountain meadow, border of larch forest, on foliage; 5. Juvenile forms of *Heriaeus melloteei* kept on herbs, breed to adult in Poznań, Poland.
- VII. Arkhangai Aimak, 35 km N of Terkhiin Tsagaan National Park, during trip from Terkhiin Tsagaan Nuur National Park to Khövsgöl Nuur National Park, (48°29'N, 99°38'E), 22 July 2000, under the stones on steppe.

RESULTS

It was identified 11 species of crab spiders of five genera from the collected material. The most numerous genera were as follows: *Xysticus* (six species), *Ozyptila* (two species), *Heriaeus*, *Misumena* and *Synema* (each consists of one species), Table 2.

A list of crab spiders (Thomisidae) with notes on distribution in Mongolia

Heriaeus melloteei SIMON, 1886

This species resembles several closely related other species of the genus (ONO 1988) and this why it might be misidentified in the past (LOERBROKS 1983).

Distribution

Wide distributed along the Palearctic. It is also recorded in the neighbouring regions of northern Mongolia: Tuva, Buryatia and Chita Region (DANILOV 1993). In Mongolia mainly in its central and northern parts (Fig. 1).

Remarks

LOERBROKS (1983) synonymised *Heriaeus oblongus* SIMON, 1918 with *Heriaeus melloteei* SIMON, 1886. If *H. oblongus* is a separate species, the range of distribution of *H. melloteei* will be Siberio-Manchurian (East Palearctic) (Y. MARUSIK, pers. comm.).

Habitat

On vegetation and shrubs, often in meadows and on steppes (DANILOV 1993, LOGUNOV & MARUSIK 1994).

Localities (Fig. 1)

1 – Töv Aimak, Ulaanbaatar (LOKSA 1965 as *H. oblongus*); 2 – Ömnögovi Aimak, Gurvan Sajchan (LOKSA 1965 as *H. oblongus*); 3 – Övörkhangai Aimak, 20 km S of Chovd (LOKSA 1965 as *H. oblongus*); 4 – Selenge Aimak, Shamor (ONO 1988); 5 – Sühbaatar Aimak, Toumantzogto (ONO 1988); 6 – Töv Aimak, Bayankhangai Somon (MARUSIK & LOGUNOV 1998); 7 – Töv Aimak, Baga-Mukhar (MARUSIK & LOGUNOV 1998); 8 – Övörkhangai Aimak, Zuunbayan-Ulaan Somon, Zamtyн Davaa (MARUSIK & LOGUNOV 1998); 9 – Bulgan Aimak, Bajanuur (MARUSIK & LOGUNOV 2006); 10 – Bulgan Aimak, Chutag Somon, Namnan ul (MARUSIK & LOGUNOV 2006); 11 – Töv Aimak, Ulan-Baator, Bogdo ul (MARUSIK & LOGUNOV 2006); 12 – Töv Aimak, Ulan-Bator, 25 km E of Lun Somon (MARUSIK & LOGUNOV 2006); 13 – Khövsgöl Aimak, Tosontsengel Somon (MARUSIK & LOGUNOV 2006); 14 – Dundgovi Aimak, Delgerchangaj Somon, Delgerchangaj ul (MARUSIK & LOGUNOV 2006); 15 – Töv Aimak, k726 (unknown exact locality) (MARUSIK & LOGUNOV 2006); 16 – Bulgan Aimak, VI. 5 (present data).

Misumena vatia (CLERCK, 1758)

Distribution

Holarctic. Widespread in southern Siberia: Altay, Tuva, to Sakhalin and Kurile Islands (ONO et al. 1990), Japan (ONO 1988), Korea (KIM 1991). In central Siberia, it is common in Yakutia (along north and central Lena river) (MARUSIK et al. 1993), and it has been recorded from the upper Kolyma (MARUSIK 1988) and Chukotka (Y. MARUSIK, pers. comm.). In southern Siberia, the species is known from Buryatia (Ulan-ude and Bur-

dukovo) (KULCZYŃSKI 1901, DANILOV 1993) and the vicinity of Irkutsk (IZMAILOVA 1989). In Mongolia, it was found only in Bulgan and Töv Aimaks (Fig. 2).

Habitat

Very common on meadows and forest glades.

Localities (Fig. 2)

1 – Bulgan Aimak, 5 km E of Abzaga Somon (LOKSA 1965); 2 – Töv Aimak, Baga-Mukhar (MARUSIK & LOGUNOV 1998); 3 – Bulgan Aimak, Khishig-Öndör Somon (MARUSIK & LOGUNOV 2006); 4 – Bulgan Aimak, Orkhon Somon (MARUSIK & LOGUNOV 2006); 5 – Bulgan Aimak, Chanzargalant Somon (twice the same locality) (MARUSIK & LOGUNOV 2006); 6 – Bulgan Aimak, Chutag Somon, Namnan ul (MARUSIK & LOGUNOV 2006); 7 – Töv Aimak, Ulan-Baator, Bogdo ul (twice the same locality) (MARUSIK & LOGUNOV 2006); 8 – Töv Aimak, Bajantsogot Somon (MARUSIK & LOGUNOV 2006); 9 – Töv Aimak, Tosgoni oboo (twice the same locality) (MARUSIK & LOGUNOV 2006); 10 – Bulgan Aimak, VI. 2 (present data).

***Ozyptila atomaria* (PANZER, 1801)**

Distribution

The Palearctic Region, from Portugal to Japan, mainly in temperate zone (boreal) (ONO et al. 1990, LOGUNOV & MARUSIK 1994, ONO & MATSUDA 2003). Recent data broadened the range of this species to southern Siberia. In the past, it was only known from Buryatia (36 km NW of Irkutsk) and Tuva (5-7 km from Sesarlig) (IZMAILOVA 1989, LOGUNOV & MARUSIK 1994). *O. atomaria* is recorded from Mongolia for the first time. Recently it was also recorded from Xinjiang (Y. MARUSIK, pers. com.)

Habitat

On grasses of dry habitats in Europe and on litter of mixed forests (LOGUNOV & MARUSIK 1994).

Locality (Fig. 3)

1 – Bulgan Aimak, VI. 1 (present data).

***Oxyptila orientalis* KULCZYŃSKI, 1926**

This species was described after a single female specimen from Kamchatka and it was revised by Hippa et al. (1986). LOGUNOV & MARUSIK (1994) while studying the material (holotype male and paratypes of females) of *Oxyptila balkarica* OVTSHARENKO, 1979 revealed a synonymy of these specimens with the conspecific *O. orientalis*.

Distribution

Caucasus, Sakhalin, Siberia (E of Lena river), species of boreo-alpine range (MARUSIK et al. 2000). The site in Mongolia is located on the southern line of distribution of this species in SE Asia. *O. orientalis* was collected from the litter of larch forest. This species is recorded from Mongolia for the first time.

Habitat

On litter and moss.

Locality (Fig. 4)

1 – Khövsgöl Aimak, IV. 2 (present data).

Synema globosum* (FABRICIUS, 1775)*Distribution**

The Palearctic region. Besides Mongolia, it is also known from Khakassia and Buryatia (LOGUNOV & MARUSIK 1994).

Habitat

Most often on dry meadows on bushes, flowers and herbs.

Localities (Fig. 5)

1 – Töv Aimak, Zuunharaa (LOKSA 1965); 2 – Selenge Aimak, Shaamar (ONO 1988); 3 – Bulgan Aimak, VI. 3 (present data).

***Xysticus audax* (SCHRANK, 1803)**

X. audax is closely related to a number of *Xysticus* species: *X. cristatus* (CLERK, 1758), *X. macedonicus* ŠILHAVÝ, 1944, *X. pseudocristatus* AZARKINA et LOGUNOV, 2000, *X. promiscuus* O. P.-CAMBRIDGE, 1876 and *X. thessalicus* SIMON, 1916 (see AZARKINA & LOGUNOV 2000, JANTSCHER 2001). Both *X. cristatus* and *X. audax* are widespread in the

Palaearctic region. Although these species inhabit different habitats and display tiny differences in the structure of copulatory organs, as well as some differences in somatic morphology of males (width of prosoma, length of tibia II, tibia III and metatarsus IV (P. SZYMKOWIAK, unpublished data), they might have been misidentified in the past.

Distribution

Palaearctic, temperate zone (AZARKINA & LOGUNOV 2000).

Habitat

Most often on coniferous (*Pinus* sp.) greenwood and heath-land.

Localities (Fig. 6)

1 – Töv Aimak, Ulaanbaatar (LOKSA 1965); 2 – Övörkhongai Aimak, Züünbayan-Ulaan Somon, Zamtyin-Davaa (MARUSIK & LOGUNOV 1998); 3 – Töv Aimak, Baga-Mukhar (MARUSIK & LOGUNOV 1998); 4 – Bulgan Aimak, Chanzargalant Somon, (MARUSIK & LOGUNOV 2006); 5 – Töv Aimak, Ulaanbaatar, Nucht in Bogdo ul, (sixfold the same locality) (MARUSIK & LOGUNOV 2006); 6. – Töv Aimak, SE of Bayansogt (twice the same locality) (MARUSIK & LOGUNOV 2006); 7 – Töv Aimak, Tosgoni ovoo, 5-10 km N of Ulaanbaatar (MARUSIK & LOGUNOV 2006); 8 – Bulgan Aimak, Khishig-Öndör Somon (MARUSIK & LOGUNOV 2006); 9 – Bulgan Aimak, Orkhon Somon (MARUSIK & LOGUNOV 2006); 10 – Bulgan Aimak, VI. 2 (present data).

Xysticus baltistanus (CAPORACCO, 1935)

Distribution

Central Asia, NE and Central Siberia, Mongolia, China, temperate zone (MARUSIK & LOGUNOV 1990). Majority of records are known from southern Siberia (Tuva) (LOGUNOV & MARUSIK 1994).

Habitat

Xerophilous habitats (e.g. rocky and dry steppes) (LOGUNOV & MARUSIK 1994).

Localities (Fig. 7)

1 – Töv Aimak, Baga-Mukhar (MARUSIK & LOGUNOV 1998); 2 – Bulgan Aimak, Khishig-Öndör and Orkhon Somons (MARUSIK & LOGUNOV 2006); 3 – Töv Aimak, Ulaanbaatar, Nucht in Bogdo ul (MARUSIK & LOGUNOV 2006); 4 – Uvs Aimak, Sagil Somon, Örög Nuur (MARUSIK & LOGUNOV 2006); 5 – Khövsgöl Aimak, IV. 2, IV. 3, IV. 4 (present data).

Xysticus emertoni KEYSERLING, 1880**Distribution**

Siberio-Nearctic (USA, Canada, Alaska, Russia, Kazakhstan, Mongolia, China, temperate zone). In Mongolia, it was first recorded by LOKSA (1965) under the name of *X. excellens* Kulczyński, 1885. This species is abundant in southern Siberia (ŠTERNBERGS 1981, VERZHUTSKI et al. 1985, IZMAILOVA 1989, all records as *X. excellens*).

Habitat

Litter dweller on meadows and bogs, occasionally inhabits herbs (DONDALE & REDNER 1978, MORSE 1992).

Localities (Fig. 8)

1 – Töv Aimak, Ulaanbaatar (LOKSA 1965); 2 – Övörkhangai Aimak, Baga Bogd between Bogd Somon and Baruun Bayan-Ulaan Somon (LOKSA 1965 as *X. excellens*); 3 – Arkhangai Aimak, N-E coast of Ögii nuur (LOKSA 1965 as *X. excellens*); 4 – Arkhangai Aimak, Öndör Ulaan, Tsakhir, Chulut Gorge (MARUSIK & LOGUNOV 1998); 5 – Töv Aimak, Baga-Mukhar (MARUSIK & LOGUNOV 1998); 6 – Arkhangai Aimak, Khangai Mountains (twice the same locality) (MARUSIK & LOGUNOV 2006); 7 – Bulgan Aimak, Khishig-Öndör and Orkhon Somons, (MARUSIK & LOGUNOV 2006); 8 – Bulgan Aimak, Chanzargalant Somon (twice the same locality) (MARUSIK & LOGUNOV 2006); 9 – Töv Aimak, Bayantsogt Somon (twice the same locality) (MARUSIK & LOGUNOV 2006); 10. – Töv Aimak, Ulaanbaatar, Nucht in Bogdo ul (MARUSIK & LOGUNOV 2006); 11 – Töv Aimak, Tosgoni ovoo, 6-10 km N of Ulaanbaatar (MARUSIK & LOGUNOV 2006); 12 – Khövsgöl Aimak, Halzan Sogootyn davaa, on the river Tesijn gol (MARUSIK & LOGUNOV 2006); 13 – Khövsgöl Aimak, IV. 2, IV. 4, IV. 5 (present data)

Xysticus nenilini MARUSIK 1989

X. nenilini was described after a male. The type locality lies in high the mountains of Tuva (Arzaity), Siberia. This species belongs to the *labradorensis* species group and is closely related to *X. albidus* Grese, 1909 (on the basis of male features) (MARUSIK 1989).

Distribution:

Russia: Central Yakutia, Tuva and Mongolia (MARUSIK 1989, LOGUNOV & MARUSIK 1994, MARUSIK & LOGUNOV 2006).

Habitat

Under stones on steppe and in the litter of the border of larch forest.

Localities (Fig. 9)

1 – Arkhangai Aimak, Khangai Mountains (MARUSIK & LOGUNOV 2006); 2 – Bayan-Ölgii Aimak, 27 km S from Tsagaannuur Somon, 2690 m a.s.l. (MARUSIK & LOGUNOV 2006); 3 – Bulgan Aimak, 11 km W of Bayannuur Somon, 1000 m a.s.l. (MARUSIK & LOGUNOV 2006); 4 – Töv Aimak, Ulaanbaatar, Bogdo ul, 5 km S from the centre of the city, 1600 m a.s.l.; 1880-2000 m a.s.l.; 12 km SE from the centre of the city, 1650 m a.s.l. (three sites) (MARUSIK & LOGUNOV 2006); 5 – Khovd Aimak, 4-12 km from Naranbulag, 1800 m a.s.l. (MARUSIK & LOGUNOV 2006); 6 – Govi-Altay Aimak, 10 km S of Tsogt Somon (MARUSIK & LOGUNOV 2006); 7 – Khentii Aimak, Ondorhantol (MARUSIK & LOGUNOV 2006); 8 – Khövsgöl Aimak, on the Delger mörön river, 1450 m a.s.l. (MARUSIK & LOGUNOV 2006); 9 – Dundgovi Aimak, 20 km S of Delgertsogt Somon, 1480 m a.s.l. (MARUSIK & LOGUNOV 2006); 10 – Uvs Aimak, 35 km from NW from Tes Somon, 1400 m a.s.l. (MARUSIK & LOGUNOV 2006); 11 – Uvs Aimak, between Uureg nuur and Pass Ulaan davaa, 1850 m a.s.l. (MARUSIK & LOGUNOV 2006); 12 – Khövsgöl Aimak, IV. 3 (present data); 13 – Arkhangai Aimak, VII. (present data).

Xysticus sibiricus* KULCZYŃSKI, 1908*Distribution**

Siberia, boreal zone (from the upper Kolyma in NE Asia, throughout Yakutia, southwards to Mongolia (MARUSIK 1988, 1989, MARUSIK et al. 2000) and westward to Tuva (MARUSIK et al. 2000). It was also recorded from Chita Region (VERZHUTSKI et al. 1985, IZMAILOVA 1978, 1980, 1989; DANILOV & KURTOVA 1991).

Habitat

Under bark of coniferous trees (pine, fir, larch) (LOGUNOV & MARUSIK 1994). In Mongolia it was collected from crowns of *Larix sibirica*.

Localities (Fig. 10)

1 – Töv Aimak, Ulaanbaatar (MARUSIK 1989); 2 – Arkhangai/Zavkhan Aimaks, Tarvagatai Mountains (unknown exact locality) (MARUSIK 1989); 3 – Khövsgöl Aimak, IV. 1 (present data).

Xysticus vachoni SCHENKEL, 1963**Distribution**

Siberia, boreal zone (from NE of Chukotka and Kolyma) (MARUSIK et al. 1992), southwards to China (MARUSIK 1989) and Japan (ONO 1988 as *Xysticus jacuticus* Utochkin, 1968) and westward to east Kazakhstan. In southern Siberia, it was recorded from Transbaikalia (VERZHUTSKI et al. 1985, IZMAILOVA 1980 1989 as *X. jacuticus*).

Localities (Fig. 11)

1 – Arkhangai/Zavkhan Aimaks, Tarvagatai Mountains (unknown exact locality) (MARUSIK 1989); 2 – Töv Aimak, Bayantsogt Somon, environs of Ulaanbataar (MARUSIK & LOGUNOV 1998); 3 – Töv Aimak, Baga-Mukhar (MARUSIK & LOGUNOV 1998); 4 – Bulgan Aimak, VI. 2, VI. 3 (present data).

DISCUSSION

Araneofauna of Mongolia is relatively well studied taking into account faunistic and taxonomic papers (e.g. KULCZYŃSKI 1901, LOKSA 1965, WESOŁOWSKA 1981, PRÓSZYŃSKI 1982, HEIMER 1985, 1987, WUNDERLICH 1995, LOGUNOV & MARUSIK 1998, MARUSIK & LOGUNOV 1998, 2001, 2006). A number of the thomisid species is high (42) in Mongolia in comparison to other temperate zone countries or adjoining Republics (Poland – 43, Czech Republic – 42, Tuva – 40 species) (BUCHAR & RŮŽIČKA 2002, STAREGA 2004, Y. MARUSIK pers. comm.). Crab spiders are also relatively good researched in Siberia (MARUSIK 1989, LOGUNOV 1992, MARUSIK et al. 1993, LOGUNOV 1994, LOGUNOV & MARUSIK 1994, UTOTCHKIN & SAVELYEVA 1995, LOGUNOV & MARUSIK 1998, MARUSIK et al. 2000). Nevertheless, there are still a few species distributed along neighbouring northern regions of Mongolia and surely they should occur in Mongolia as well.

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Table 1. A list of crab spiders (Thomisidae) known from Mongolia with remarks on taxonomy.

Species	Mongolian records	Remarks
-1-	-2-	-3-
<i>Diaea suspiciosa</i> O. PICKARD-CAMBRIDGE, 1885	MARUSIK & LOGUNOV (2006)	as <i>Heriaeus oblongus</i> SIMON, 1918 see LOKSA (1965)
<i>Ebrechtella tricuspadata</i> (FABRICIUS, 1775)	MARUSIK & LOGUNOV (2006)	
<i>Heriaeus melloteei</i> SIMON, 1886	LOKSA (1965); ONO (1988); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Misumena grubei</i> (SIMON, 1895)	SIMON (1895)	as <i>Thomisus grubei</i> (SIMON, 1895)
<i>Misumena vatia</i> (CLERCK, 1757)	LOKSA (1965); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
" <i>Ozyptila</i> " (<i>Xysticus</i> ?) <i>inaequalis</i> KULCZYŃSKI, 1901	LOGUNOV & MARUSIK (1994); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2001); MARUSIK & LOGUNOV (2006)	
<i>Ozyptila kaszabi</i> MARUSIK et LOGUNOV, 2001	MARUSIK & LOGUNOV (2001); MARUSIK & LOGUNOV (2006)	
<i>Runcinia tarabayevi</i> MARUSIK et LOGUNOV, 1990	MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Synema globosum</i> (FABRICIUS, 1775)	LOKSA (1965); ONO (1988)	
<i>Thomisus onustus</i> WALCKENAER, 1805	SIMON (1895); LOKSA (1965); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	as <i>Thomisus albus</i> (GMELIN, 1789) see SIMON (1895)
<i>Thomisus zyzyni</i> MARUSIK et LOGUNOV, 1990	MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	may refer to <i>Tmarus rimosus</i> see MARUSIK & LOGUNOV (1998)
<i>Tmarus gajdosi</i> MARUSIK et LOGUNOV, 2001	MARUSIK & LOGUNOV (2001)	
<i>Tmarus piger</i> (WALCKENAER, 1802)	LOKSA (1965)	
<i>Tmarus rimosus</i> PAIK, 1973	MARUSIK & LOGUNOV (1998)	
<i>Xysticus acerbus</i> THORELL, 1872	LOKSA (1965)	as <i>Xysticus viduus</i> KULCZYŃSKI, 1898 see LOKSA (1965)
<i>Xysticus audax</i> (SCHRANK, 1803)	LOKSA (1965); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	as <i>Xysticus dondalei</i> see MARUSIK (1988)
<i>Xysticus austrosibiricus</i> LOGUNOV et MARUSIK, 1998	LOKSA (1965); LOGUNOV & MA- RUSIK (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus baltistanus</i> (CAPORIACCO, 1935)	MARUSIK (1988); LOGUNOV & MARUSIK (1994); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus bifasciatus</i> C.L. KOCH, 1837	MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus bonneti</i> DENIS, 1937	MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus cristatus</i> (CLERK, 1758)	KULCZYŃSKI (1901); MARUSIK & LOGUNOV (1998); AZARKINA & LOGUNOV (2000)	as <i>Xysticus excellens</i> KULCZYŃSKI, 1885 see LOKSA (1965)

-1-	-2-	-3-
<i>Xysticus emertoni</i> KEYSERLING, 1880	LOKSA (1965); LOGUNOV & MARUSIK (1994); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus ephippiatus</i> SIMON 1880,	ONO (1988); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus ferruginoides</i> SCHENKEL, 1963	SCHENKEL (1963), LOGUNOV & MARUSIK (1994)	
<i>Xysticus gobiensis</i> MARUSIK et LOGUNOV, 2001	MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2001)	replacement name for <i>Xysticus laticeps</i> SCHENKEL, 1963 see MARUSIK & LOGUNOV (2001)
<i>Xysticus hedini</i> SCHENKEL, 1936	SCHENKEL (1936); LOKSA (1965); MARUSIK & LOGUNOV (2006)	
<i>Xysticus idolohtytus</i> LOGUNOV, 1994	LOGUNOV (1994)	
<i>Xysticus cf. lineatus</i> (WESTRING, 1851) ?	MARUSIK & LOGUNOV (1998); LOGUNOV et al. (2001)	should be described as a new species see LOGUNOV et al. (2001)
<i>Xysticus luctuosus</i> (BLACKWELL, 1836)	MARUSIK & LOGUNOV (1998)	
<i>Xysticus mongolicus</i> SCHENKEL, 1963	SCHENKEL (1963)	
<i>Xysticus mugur</i> MARUSIK, 1990	MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus nenilini</i> MARUSIK, 1989	LOGUNOV & MARUSIK (1994); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus ninnii fusciventris</i> CROME, 1965	LOKSA (1965)	as <i>Xysticus ninnii</i> in LOKSA (1965) see UTOCHKIN & SAVALYEVA (1995)
<i>Xysticus pseudobliteus</i> (SIMON, 1880)	SCHENKEL (1963)	as <i>Xysticus chaffanjoni</i> see SCHENKEL (1963)
<i>Xysticus pseudocristatus</i> AZARKINA et LOGUNOV, 2000	AZARKINA & LOGUNOV (2000)	
<i>Xysticus seserlig</i> LOGUNOV et MARUSIK, 1994	MARUSIK & LOGUNOV (2001); MARUSIK & LOGUNOV (2006)	
<i>Xysticus sibiricus</i> KULCZYŃSKI, 1908	MARUSIK (1989); ONO et al. (1990); MARUSIK & LOGUNOV (2001)	
<i>Xysticus sjoestedti</i> SCHENKEL, 1936	SCHENKEL (1936); MARUSIK & LOGUNOV (1998); MARUSIK & LOGUNOV (2006)	
<i>Xysticus soederbomi</i> SCHENKEL, 1936	SCHENKEL (1936); MARUSIK & LOGUNOV (2006)	
<i>Xysticus striatipes</i> L. KOCH, 1870	KULCZYŃSKI (1901); MARUSIK & LOGUNOV (1998)	
<i>Xysticus vachoni</i> SCHENKEL, 1963	SCHENKEL (1963); MARUSIK & LOGUNOV (1998); MARUSIK (1989); MARUSIK & LOGUNOV (2006)	
<i>Xysticus wunderlichi</i> LOGUNOV, MARUSIK et TRILIKAUSKAS 2001	LOGUNOV et al. (2001)	

Table 2. A list of crab spiders (Thomisidae) collected during Polish expedition in 2000 with notes on distribution in Mongolia.

Species	Number	Locality
<i>Heriaeus melloteei</i>	1 female	VI. 5
<i>Misumena vatia</i>	1 female	VI. 2
<i>Ozyptila atomaria</i>	1 female	VI. 1
<i>Ozyptila orientalis</i>	1 male	IV. 2
<i>Synema globosum</i>	1 female	VI. 3
<i>Xysticus audax</i>	1 female	VI. 2
<i>Xysticus baltistanus</i>	1 male, 2 females	IV. 2, IV. 3, IV. 4
<i>Xysticus emertoni</i>	2 males, 1 female	IV. 2, IV. 4, IV. 5
<i>Xysticus nenilini</i>	2 females	IV. 3, VII.
<i>Xysticus sibiricus</i>	1 male	IV. 1
<i>Xysticus vachoni</i>	4 males	VI. 2, VI. 3

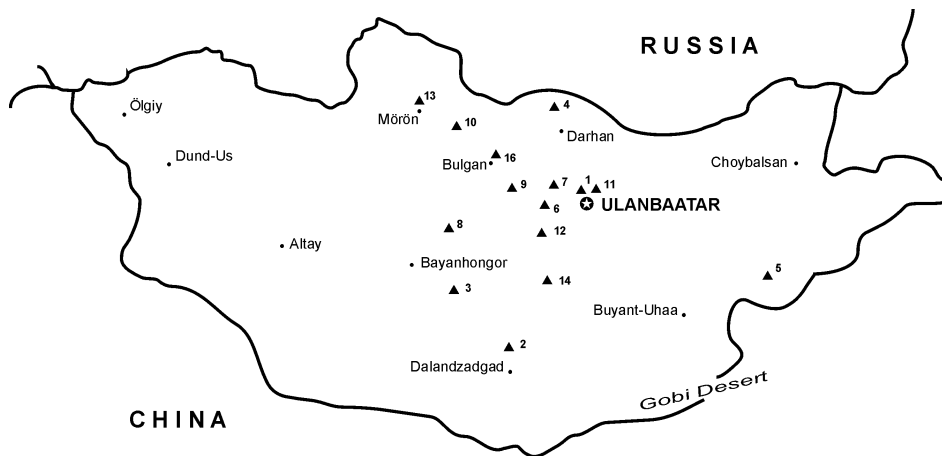


Fig. 1. Records of *Heriaeus melloteei* in Mongolia.

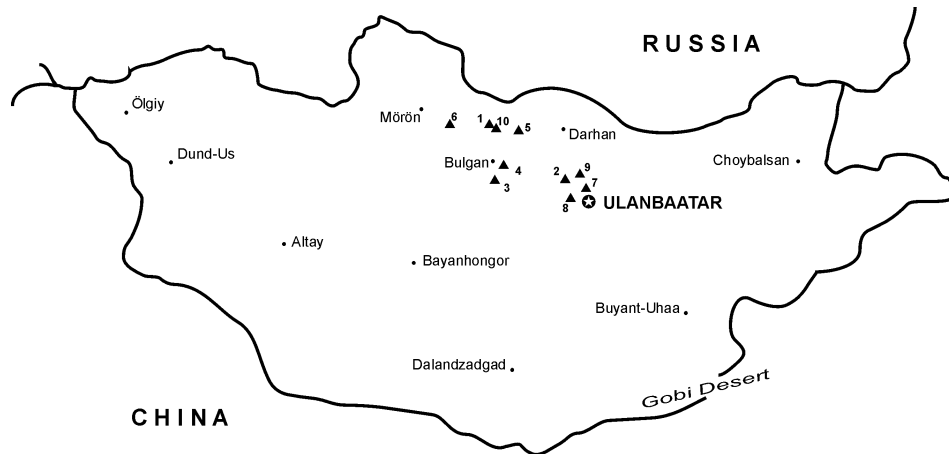


Fig. 2. Records of *Misumena vatia* in Mongolia.

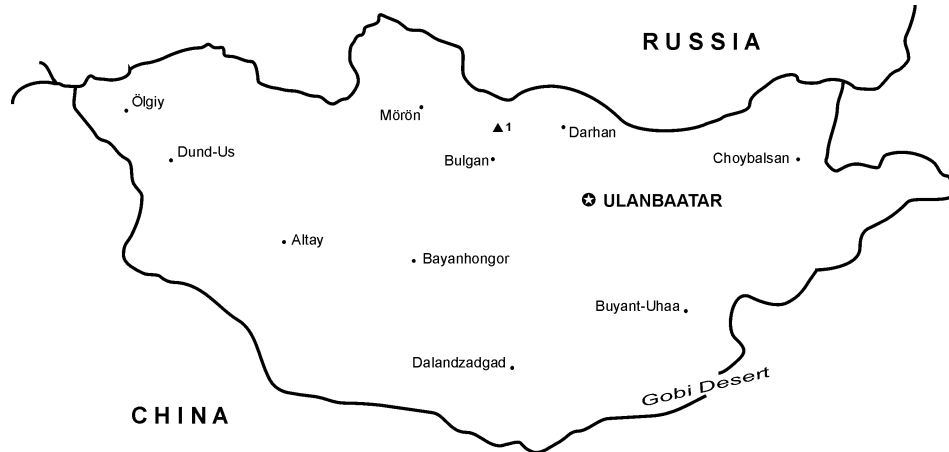


Fig. 3. Records of *Ozyptila atomaria* in Mongolia.

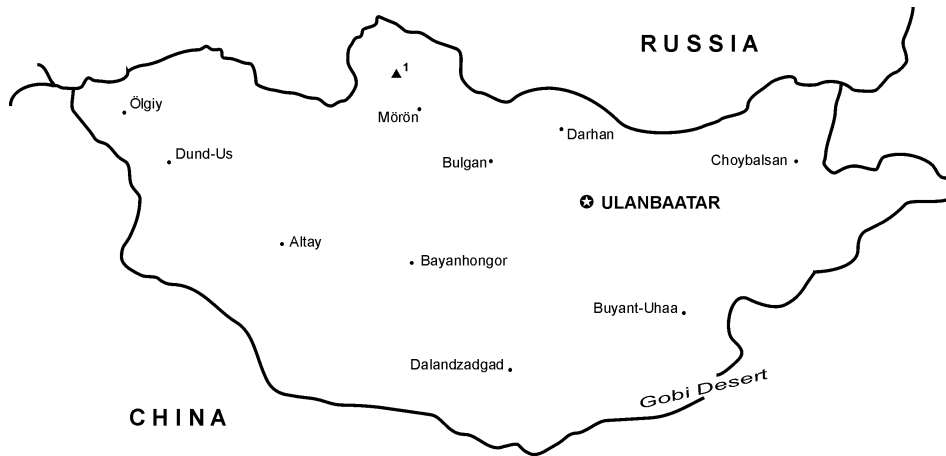


Fig. 4. Records of *Ozyptila orientalis* in Mongolia.

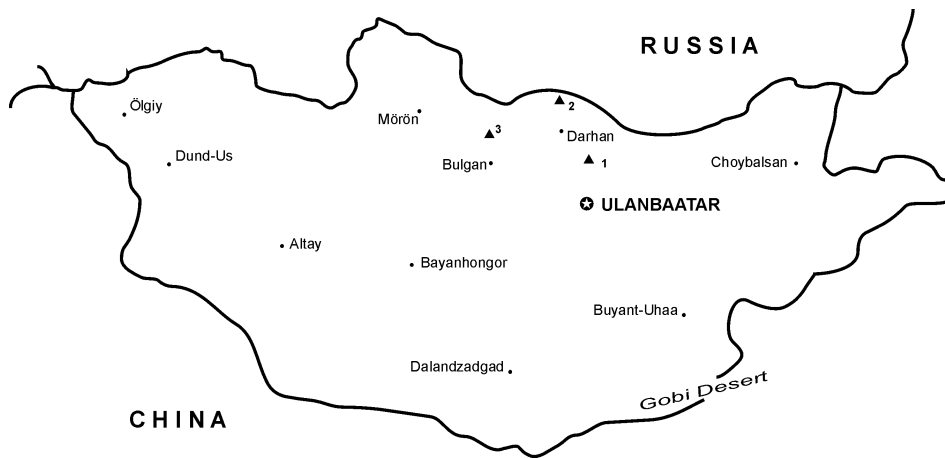


Fig. 5. Records of *Synema globosum* in Mongolia.

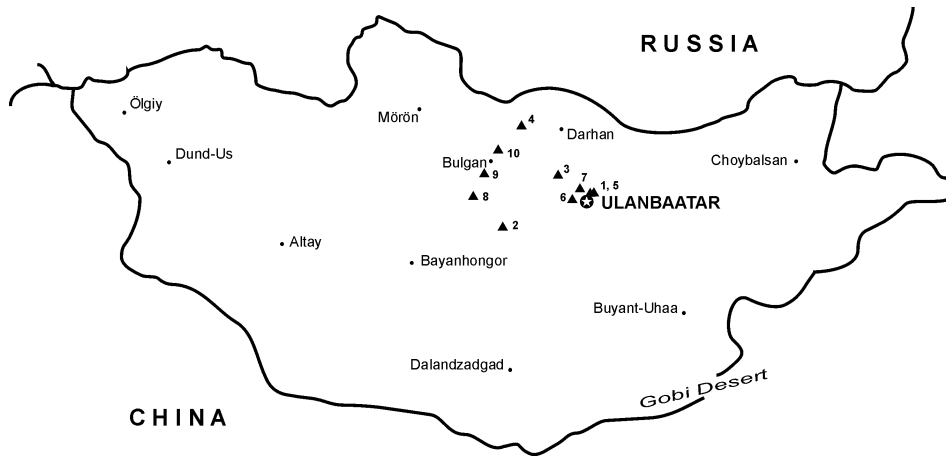


Fig. 6. Records of *Xysticus audax* in Mongolia.



Fig. 7. Records of *Xysticus baltistanus* in Mongolia.

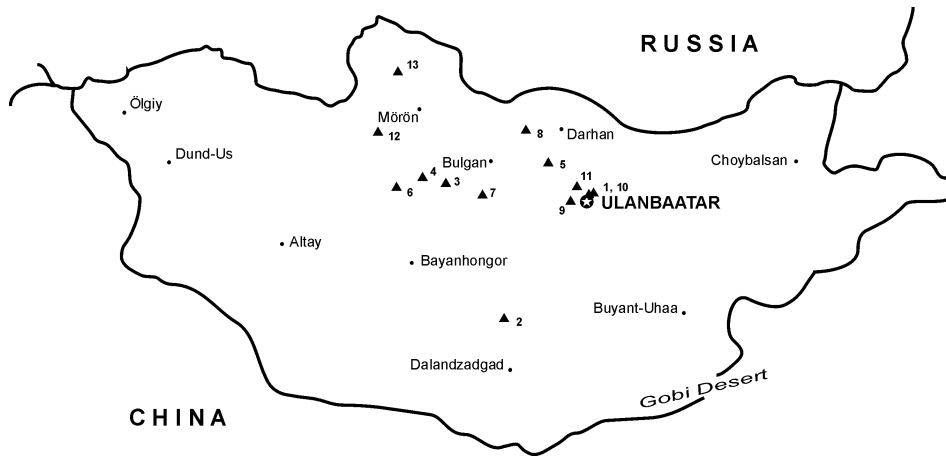


Fig. 8. Records of *Xysticus emertoni* in Mongolia.



Fig. 9. Records of *Xysticus nenilini* in Mongolia.



Fig. 10. Records of *Xysticus sibiricus* in Mongolia.



Fig. 11. Records of *Xysticus vachoni* in Mongolia.

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