

On spiders (Aranei) collected in central Xinjiang, China

О пауках (Aranei) собранных в центральном Синьцзяне, Китай

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КЛЮЧЕВЫЕ СЛОВА. Новые находки, Китай, Синьцзян, пауки, распространение, переписание.

ABSTRACT. The present paper deals with 83 species (including some unidentified species) belonging to 54 genera and 14 families collected in Xinjiang, China. Among them, two genera (*Metellina* Chamberlin & Ivie, 1941 and *Sibirocosa* Marusik *et al.*, 2004) and 10 species (with asterisk before scientific name) are new records from China, and 17 species found in Xinjiang possibly new to science. Synonymy of *Embylna logunovi* Marusik & Koponen, 1998 and *Emblyna wangi* (Song & Zhou, 1986) was confirmed. Illustrations of species new to China or poorly known taxa are presented. Male of *Sibiricosa alpina* Marusik *et al.*, 2004 is described for the first time. A new combination *Mughiphantes yadongensis* (Hu, 2001) comb.n. ex. *Lepthyphantes* was established. Comments on taxonomy and distribution range and biological notes are given as well.

РЕЗЮМЕ. В настоящей работе рассматриваются 83 вида, включая неопределённые, относящиеся к 54 родам и 14 семействам. Все они собраны в Синьцзян-Уйгурском Автономном округе Китая. Два рода, *Metellina* Chamberlin & Ivie, 1941 и *Sibirocosa* Marusik *et al.*, 2004, и 10 видов впервые отмечаются для фауны Китая. Подтверждена синонимия *Embylna logunovi* Marusik & Koponen, 1998 и *Emblyna wangi* (Song & Zhou, 1986). Впервые описан самец *Sibiricosa alpina* Marusik *et al.*, 2004. Установлена новая комбинация *Mughiphantes yadongensis* (Hu, 2001) comb.n. ex. *Lepthyphantes*. Малоизвестные и новые для Китая виды проиллюстрированы. Приведены комментарии по таксономии, распространению и биотопическому распространению отдельных видов.

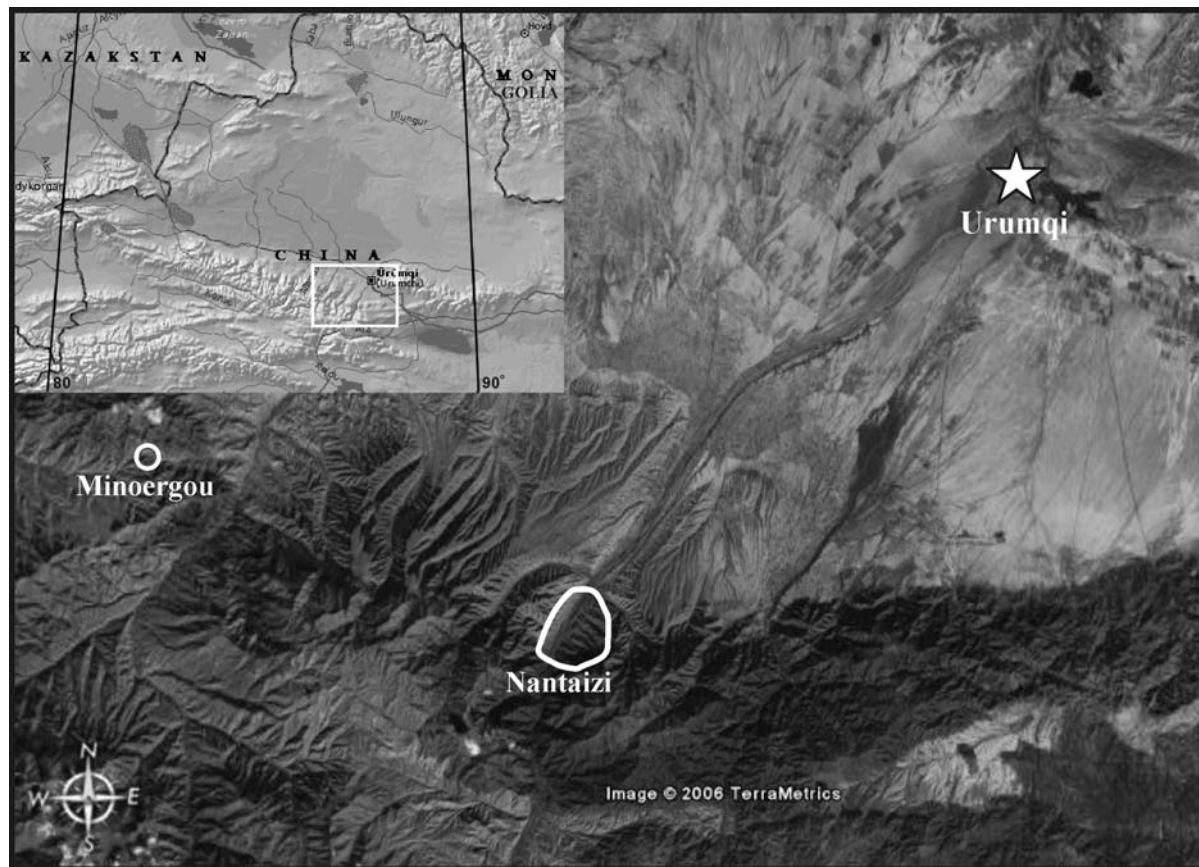
Introduction

Spiders of Xinjiang are rather well known thanks to the book written by Hu & Wu [1989] and subsequent taxonomical and faunistic publications. Hu & Wu [1989]

reported 260 species from the province. In a book about Chinese spiders [Song *et al.*, 1999] 306 species belonging to 21 families were mentioned from Xinjiang. A few more species have been added from several other taxonomic papers. To date more than 310 species are known from the province. Through a Finnish-Chinese research project (Metapopulation Research Group at the University of Helsinki and Peking University) on the Glanville fritillary butterfly (*Melitaea cinxia*), the second author had an opportunity to sporadically collect spiders near Urumqi in 2004 and 2005. New material reveals the occurrence of several species new to Xinjiang, the whole of China (with asterisk before scientific name) and even new to science. A main goal of this paper is to describe this material with special emphasis on new records. Descriptions of new species will be given in separate papers.

Material

The material was collected at two sites in the mountains of Tian Shan about 70 km southwest of Urumqi in the Xinjiang Province in northwestern China. Most of the material was collected in an area of about 10 km² between the hotel in the village of Nantaizi and a water control station (corner positions about 43.399°N 87.214°E, 43.438°N 87.246°E, 43.425°N 87.262°E, 43.402°N 87.242°E). The Nantaizi area is located on the East side of the Urumqi River and consists of half a dozen moraine ridges with relatively steep slopes at elevations ranging from about 1800 to 2100 meters. Beneath the slopes and near the river there is a flat area. The north facing slopes are dominated by spruce forests, and the south facing slopes mainly by xeromorphic sandy and stony steep habitats with relatively sparse vegetation or, in places, with a cover of bushes. The west facing slopes and the lower flat areas are mainly dry meadows. The whole area is heavily grazed by goats, sheep, cattle



Map. Location of two collecting sites Nantaizi and Minoergou in comparison to Urumqi.
Карта. Расположение двух точек сбора Nantaizi и Minoergou по отношению к Урумчи.

and horses. In the Nantaizi area, the material was collected between 3 May and 28 June 2004, apart from one specimen collected in late April 2005.

The other site from which the spiders were collected, Minoergou (43.496°N 86.897°E), about 30 km NW of Nantaizi, has rather similar habitats as Nantaizi, with grazed sloping dry meadows. This site was visited only on 15 May 2004.

The material was mainly collected in the dry meadows, if not otherwise stated under “Biological notes” for each species. However, spiders were sporadically collected in the other habitats as well, without more accurate habitat data noted. All material from both sites was collected by the second author by hand, and no traps were used.

All Xinjiang material treated here is shared between the Zoological Institute in Beijing, the College of Life Sciences, Hebei University in Baoding and the Zoological Museum, University of Turku.

Illustrations were made using a transmitted light microscope with drawing devices. SEM-microphotographs were made with a JEOL JSM-5200 in the Zoological Museum, University of Turku. Digital photographs were also made at the University of Turku.

Survey of species

AGELENIDAE C.L. Koch, 1837

Agelena labyrinthica (Clerck, 1757)

A. l.: Roberts, 1985: 156, f. 68b (♂♀).

A. l.: Hu & Wu, 1989: 179, f. 148.1–3 (♂♀).

A. l.: Roberts, 1995: 241, f. (♂♀).

A. l.: Roberts, 1998: 259, f. (♂♀).

A. l.: Song et al., 1999: 354, f. 205G-H, 207A (♂♀).

MATERIAL. Nantaizi, 2 ♂♂ 5 ♀♀.

COMMENTS. This species has a trans-Palaeartic range [Marusik et al., 2000].

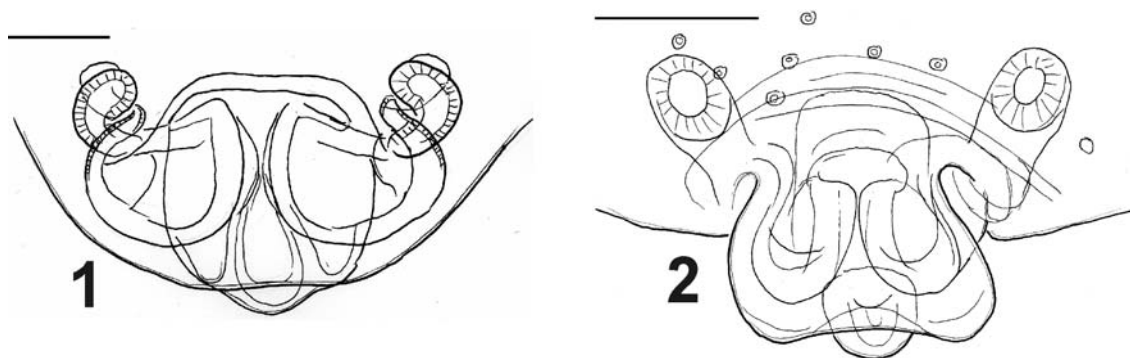
Paracoelotes sp.

Fig. 25

MATERIAL. Nantaizi, 3 ♀♀; Minoergou, 2 ♀♀ 1 juv.

COMMENTS. This is a new species which resembles *P. birulai* (Ermolajev, 1927), but has a shorter “scape” and shorter, wider epigynal teeth.

BIOLOGICAL NOTES. 2 ♀♀ were found under a stone in a spruce dominated forest, in a gully where water runs from the mountains during the melting of snow or rainfall.



Figs 1–2. Epigynes after maceration *Lidia* sp. (1) and *Mughiphantes* sp. (2). Scale 0.1 mm.

Рис. 1–2. Эпигины после мацерации *Lidia* sp. (1) и *Mughiphantes* sp. (2). Масштаб 0,1 мм.

ARANEIDAE Simon, 1895

Aculepeira packardi (Thorell, 1875)

A. p.: Levi, 1977: 228, f. 148–161, 174, 176–181 (♂♀).

A. p.: Yin et al., 1997: 106, f. 32a–i (♂♀).

A. p.: Song et al., 1999: 230, f. 132A–C, J–K, 145K (♂♀).

MATERIAL. Nantaizi, juveniles.

COMMENTS. It has a circum-Holarctic boreo-nemoral range: from North Scandinavia (sub. *Araneus lapponicus* Holm, 1945), via the Urals southward to Kyrgyzstan, Mongolia and China [Marusik et al., 2000]. The northernmost locality in the Palaearctic is at the Olenyok River mouth (73°N).

Araneus tartaricus (Kroneberg, 1875)

A. t.: Spassky & Shnitnikov, 1937: 276, f. 3 (♂).

?*A. t.*: Yin et al., 1997: 191, f. 108a–c (♀).

MATERIAL. Nantaizi, 1 subad. ♂ (coll. in the end of June and reared to adulthood in July).

COMMENTS. This species has been reported from Central Asia to Japan [Platnick, 2006], but it seems that its range is limited to the eastern part of Central Asia, adjacent Altai and Xinjiang. The specimen illustrated by Song et al. [1999: f. 140K–L] belongs to another species. Its occurrence in Hubei [Yin et al., 1997] is very improbable.

BIOLOGICAL NOTES. The specimen was found on a house wall in the shade of a balcony.

Araneus diadematus Clerck, 1757

A. d.: Roberts, 1985: 208, f. 93a (♂♀).

A. d.: Roberts, 1995: 317, f. (♂♀).

A. d.: Yin et al., 1997: 167, f. 83a–h (♂♀).

A. d.: Roberts, 1998: 331, f. (♂♀).

A. d.: Song et al., 1999: 238, f. 137E, G, 143B–C, 147M (♂♀).

MATERIAL. Nantaizi, 2 juv.

COMMENTS. This species has a circum-Holarctic distribution.

Araniella displicata (Hentz, 1847)

A. d.: Roberts, 1985: 216, f. 97e (♂♀).

A. d.: Roberts, 1995: 329, f. (♂♀).

A. d.: Tanikawa, 1995: 56, f. 10–16 (♂♀).

A. d.: Yin et al., 1997: 208, f. 127a–f (♂♀).

A. d.: Roberts, 1998: 342, f. (♂♀).

MATERIAL. Nantaizi, 1 ♂ 3 ♀♀(?).

COMMENTS. It has a circum-Holarctic boreo-nemoral distribution and ranges from Europe to the middle reaches of the Anadyr River and the Kolyma River mouth (personal data), southward to Honshu and Shaanxi [Marusik et al., 2000]. Specimens from Xinjiang were compared with those from Finland and no distinct differences were found.

Araniella sp.

MATERIAL. Nantaizi, 2 ♂♂.

COMMENTS. This species is similar to *A. displicata* but seems to belong to an undescribed species.

CHEIRACANTHIDAE Wagner, 1888

Cheiracanthium erraticum (Walckenaer, 1802)

C. e.: Roberts, 1985: 88, f. 34a (♂♀).

C. e.: Roberts, 1995: 133, f. (♂♀).

C. e.: Roberts, 1998: 142, f. (♂♀).

MATERIAL. Nantaizi, 3 ♂♂ 2 ♀♀.

COMMENTS. This species has a trans-Palaearctic boreo-nemoral (?) range and occurs from Europe to upper Kolyma (63°N) southward to NE China [Marusik et al., 2000]. It is also known from Central Asia southward to Tajikistan [Mikhailov, 1997].

Cheiracanthium sp.2

MATERIAL. Nantaizi, 2 ♂♂.

COMMENTS. Specific placement is uncertain. It may belong to an undescribed species.

Cheiracanthium sp.3

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. Specific placement is uncertain. It may belong to an undescribed species.

DICTYNIDAE O. Pickard-Cambridge, 1871

Emblyna wangi (Song & Zhou, 1986)

Figs 34–36.

Dictyna wangi Song & Zhou, 1986: 261, f. 1–4 (♂♀).

Dictyna wangi: Hu & Wu, 1989: 68, f. 50.1–4 (♂♀).

Dictyna wangi: Song et al., 1999: 364, f. 214S–T, 215I (♂♀).
Emblyna logunovi Marusik & Koponen, 1998: 80, f. 12–17 (♂♀).

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. Comparison of Xinjiang and Tuvian specimens confirmed that *Emblyna logunovi* Marusik & Koponen, 1999 is a junior synonym of *Emblyna wangi* (Song & Zhou, 1986). This species has Mongolian steppe-desert range and is known from Xinjiang, Tuva and Central Aimak of Mongolia. The two species were synonymised earlier by Danilov [2000], and *D. wangi* was transferred to *Emblyna*, but for some reason this synonymy and new combination was not mentioned in Platnick's [2006] catalogue.

Lathys aff. *balestrerii* Caporiacco, 1934
Figs 30, 37.

MATERIAL. Nantaizi, 6 ♀♀ 1 juv.

COMMENTS. Females found in Xinjiang are similar to *L. balestrerii*, known from northern India and Tian Shan (personal data) and may belong to that species, although it is not easy to make a final decision without examining males.

ERESIDAE C.L. Koch, 1851

Eresus sp.

MATERIAL. Nantaizi, 1 ♂; Minoergou, 1 ♂.

COMMENTS. As this genus has never been revised it is almost impossible to determine our specimens.

BIOLOGICAL NOTES. Both specimens were found in the grazed sloping meadows. The male found at Nantaizi was sitting in top of a plant with its forelegs directed forward, on 5 May, 43°24.467'N 87°13.485'E. In Minoergou, several males were seen running in sunlight on 15 May.

GNAPHOSIDAE Pocock, 1898

Drassodes aff. *chybyndensis* Esyunin & Tuneva, 2001

MATERIAL. Nantaizi, 3 ♂♂ 2 ♀♀.

COMPARATIVE MATERIAL. 3 ♂♂ (ISE), KAZAKHSTAN, East Kazakhstan Area, W outreaches of Naryn Mt. Rang, 15 km NW of Kurchum, env. of Aktope Town, deserts, 3–4.05.1999 (R.Yu. Dudko & I. Smelyanskiy).

COMMENTS. Xinjiang specimens are similar to *D. chybyndensis* known from South Ural. Males have very small tibial apophysis and similar cheliceral indentation, although palpal tibia is longer. Female epigyne has slightly different proportions. We saw a similar species in Zaisan Lake environs, an area adjacent to northern Xinjiang. Probably the Xinjiang population belongs to a separate species.

BIOLOGICAL NOTES. 2 ♂♂ and 1 ♀ were found indoors and at a balcony of the village hotel in Nantaizi.

Drassodes dispulsoides Schenkel, 1963

D. d. Schenkel, 1963: 32, f. 13 (♀).

D. d.: Song et al., 2004: 53, 312, f. 26A–I (♂♀).

MATERIAL. Nantaizi, 3 ♀♀; Minoergou, 1 ♂.

COMMENTS. Females that we have match well the figures in Song et al. [2004]. The single male has a longer embolus, and smaller tegular apophysis, although it comes from almost the same locality as the male illustrated in Song et al. [2004]. This species is known from Xinjiang and Shanxi.

BIOLOGICAL NOTES. 2 ♀♀ were collected under a stone at a sandy road side.

Drassodes pectinifer Schenkel, 1936

D. p. Schenkel, 1936: 28, f. 7 (♂).

D. p.: Hu, 2001: 235, f. 128.1–4 (♂♀).

D. p.: Song et al., 2004: 66, f. 34A–E (♂♀).

MATERIAL. Nantaizi, 1 ♂ 3 ♀♀.

COMMENTS. It appears that the female and male were mismatched by Hu [2001]. Our male and female, collected together, have exactly the same ventral abdominal pattern, unique for *Drassodes*. *D. pectinifer* so far is known from Xinjiang and Gansu.

BIOLOGICAL NOTES. 1 ♂ and 1 ♀ were found under the bark of a dead tree.

**Drassodes pseudolesserti* Loksa, 1965

D. p. Loksa, 1965: 25, f. 39–43 (♂♀).

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. It is new to the fauna of China. This species is known from Mongolia, Tuva and Khakassia [Marusik et al., 2000].

Drassyllus pusillus (C.L. Koch, 1833)

Zelotes p.: Roberts, 1985: 72, f. 26c (♂♀).

Zelotes p.: Roberts, 1995: 111, f. (♂♀).

Zelotes p.: Roberts, 1998: 115, f. (♂♀).

D. p.: Song et al., 1999: 448, f. 260C, J (♂♀).

D. p.: Song et al., 2004: 82, f. 45A–D (♂♀).

MATERIAL. Nantaizi, 1 ♂ 3 ♀♀.

COMMENTS. It has a trans-Palaeartic nemoral distribution and ranges from Europe eastward to Russian Far East, including Sakhalin and South Kurils [Mikhailov, 1997], northward to Central Yakutia [67°N, Marusik et al., 1993] and southward to Bhutan [Platnick & Song, 1986]. It was previously unknown from western China.

Gnaphosa licenti Schenkel, 1953

G. l.: Ovtsharenko et al., 1992: 53, f. 181–186 (♂♀).

G. l.: Song et al., 1999: 449, f. 261L, 262B (♂♀).

G. l.: Song et al., 2004: 106, f. 60A–D (♂♀).

MATERIAL. Nantaizi, 3 ♂♂.

COMMENTS. This species has an East Palaeartic (Siberio-Manchurian) range and occurs from South Ural, east Kazakhstan and Kyrgyzstan southward to Anhui and Shandong, eastward to Korea and northward to Baikal and Khakassia [Marusik et al., 2000].

BIOLOGICAL NOTES. 1 ♂ was collected on a sandy and stony dry slope.

Gnaphosidae gen. sp.

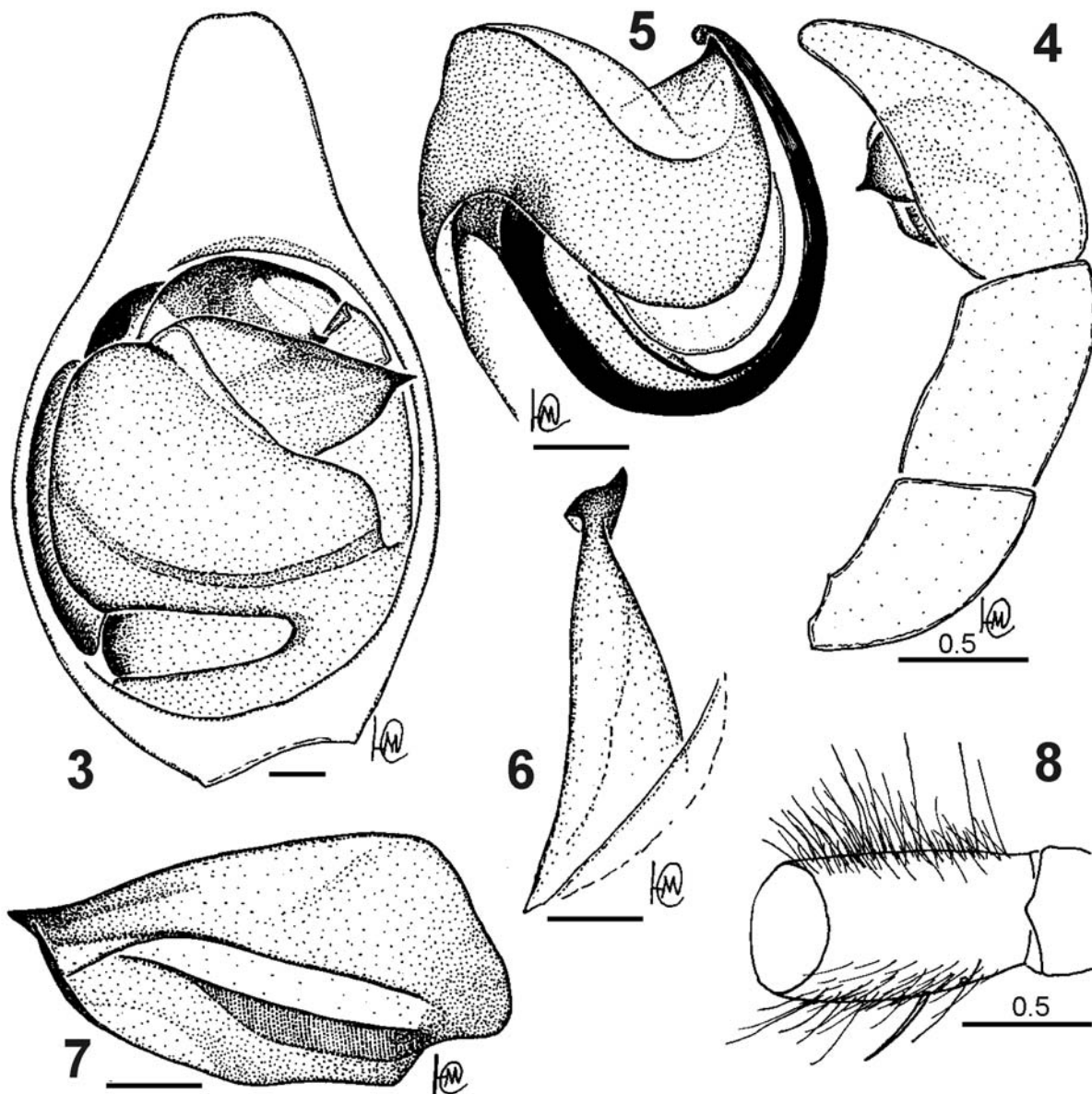
MATERIAL. Nantaizi, 1(♂) 1(♀).

COMMENTS. It is a dark coloured gnaphosid. In its habitus this species resembles *Micaria* but has longitudinal light pattern on its abdomen, which is unknown in *Micaria*.

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

MATERIAL. Nantaizi, 1 ♂ 2 ♀♀; Minoergou, 1 ♀.

COMMENTS. It appears to be a new species related to *H. signifier*.



Figs 3–8. *Alopecosa xinjiangensis* male: 3, 4 — palp, ventral and retrolateral view respectively; 5 — terminal part of palp, view from above; 6, 7 — tegular apophysis, view from above and dorsal view; 8 — palpal tibia, ventral view. Scale 0.1 mm if not otherwise indicated.

Рис. 3–8. Самец *Alopecosa xinjiangensis*: 3, 4 — палец, снизу и ретролатерально соответственно; 5 — терминальная часть пальпы, вид сверху; 6, 7 — тегулярный отросток, вид с вершины и сверху, соответственно; 8 — голень пальпы, вид снизу. Масштаб 0,1 мм если не указано иначе.

Micaria fulgens (Walckenaer, 1802)

Fig. 26

M. f.: Wunderlich, 1979: 259, f. 19a–d, 41a–b (♂♀).

M. f.: Roberts, 1995: 122, f. (♂♀).

M. f.: Roberts, 1998: 129, f. (♂♀).

MATERIAL. Nantaizi, 2 ♀♀.

COMMENTS. The species is new to China. It has an Euro-Baikalian nemoral range and occurs from western Europe to Buryatia, north to south Fennoscandia and middle Ural, south to North Africa, Azerbaijan and Kyrgyzstan [Marusik et al., 2000]. Specimens from Xinjiang were com-

pared with those from Finland and no differences were found.

Micaria lenzi Bösenberg, 1899

M. l.: Wunderlich, 1979: 277, f. 6, 29a–d, 51a–c (♂♀).

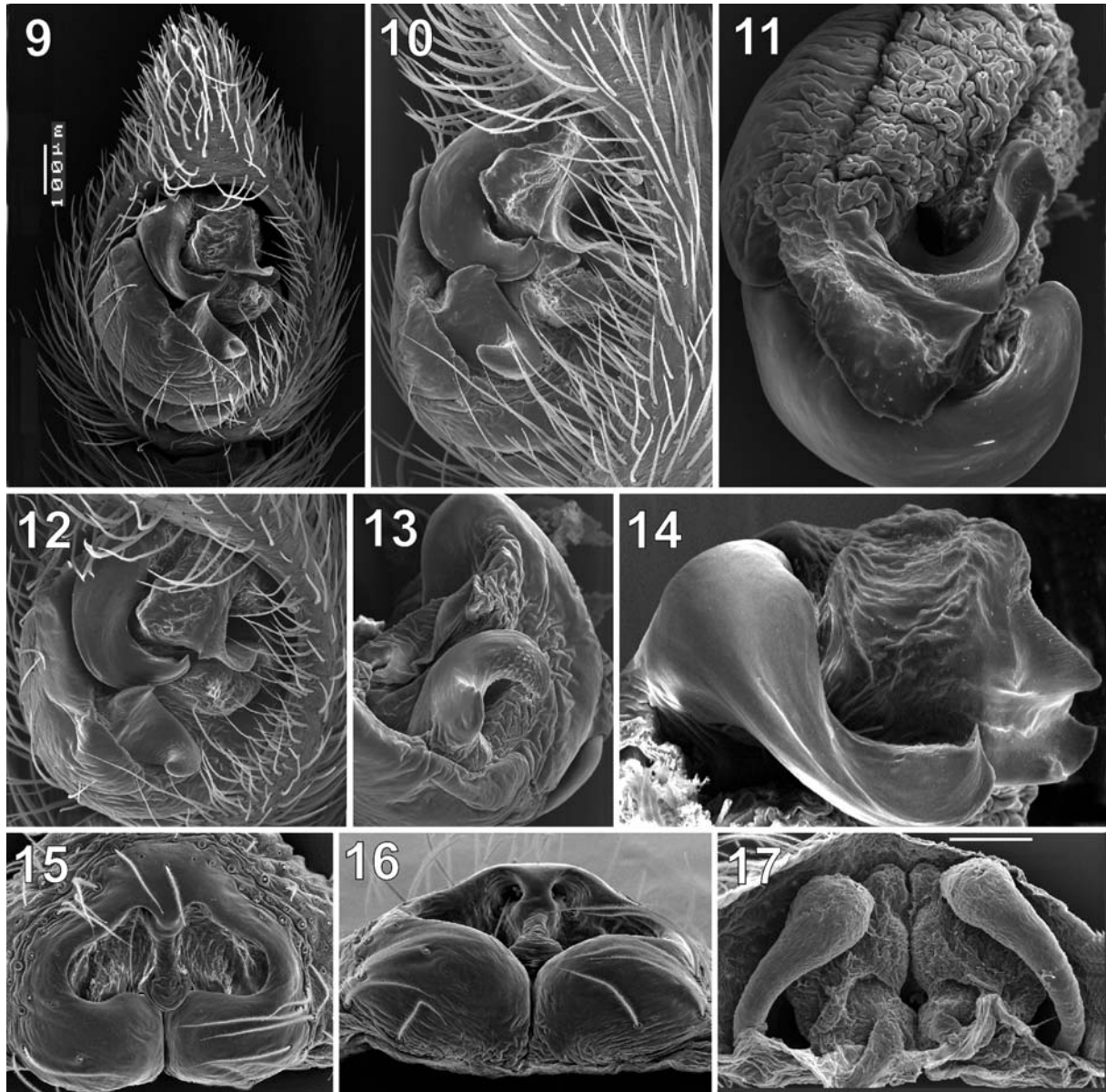
M. l.: Roberts, 1998: 127, f. (♂♀).

M. l.: Song et al., 1999: 452, f. 264D, O (♂♀).

M. l.: Song et al., 2004: 174, f. 102A–E (♂♀).

MATERIAL. Nantaizi, 2 ♂♂.

COMMENTS. This species has a trans-Palaeartic polyzonal range and is known from Central Europe, north to



Figs 9–17. SEM micrographs of *Sibiricosa alpina*: 9–10, 12 — palp, ventral, retrolateral and view from above, respectively; 11, 14 — terminal part of the bulb, view from above and ventral view, respectively; 15–17 — epigyne, ventral, caudal and dorsal view, respectively.

Рис. 9–17. СЭМ фотографии *Sibiricosa alpina*: 9–10, 12 — палпы, снизу, ретролатерально и вид с вершины, соответственно; 11, 14 — верхняя часть бульбуса, вид с вершины и снизу, соответственно; 15–17 — эпигина, вид снизу, сзади и сверху, соответственно.

southern Sweden, northeast to Kolyma River mouth (160°E) and southward to Karakoram, Xinjiang and Middle Gobi [Marusik et al., 2000].

Parasyrisca sp.

MATERIAL. Nantaizi, 1 ♂ 2 ♀♀.

COMMENTS. This is apparently a new species. It resembles *P. guzeripli* Ovtsharenko et al., 1995, known from Caucasus and *P. turkenica* Ovtsharenko et al., 1995, known from Turkey. Females of these species have a thin anterior

ridge and males have a subconical tibial apophysis, while other congeners have a flattened (lamellated) tibial apophysis. We are not sure if the male and females are conspecific.

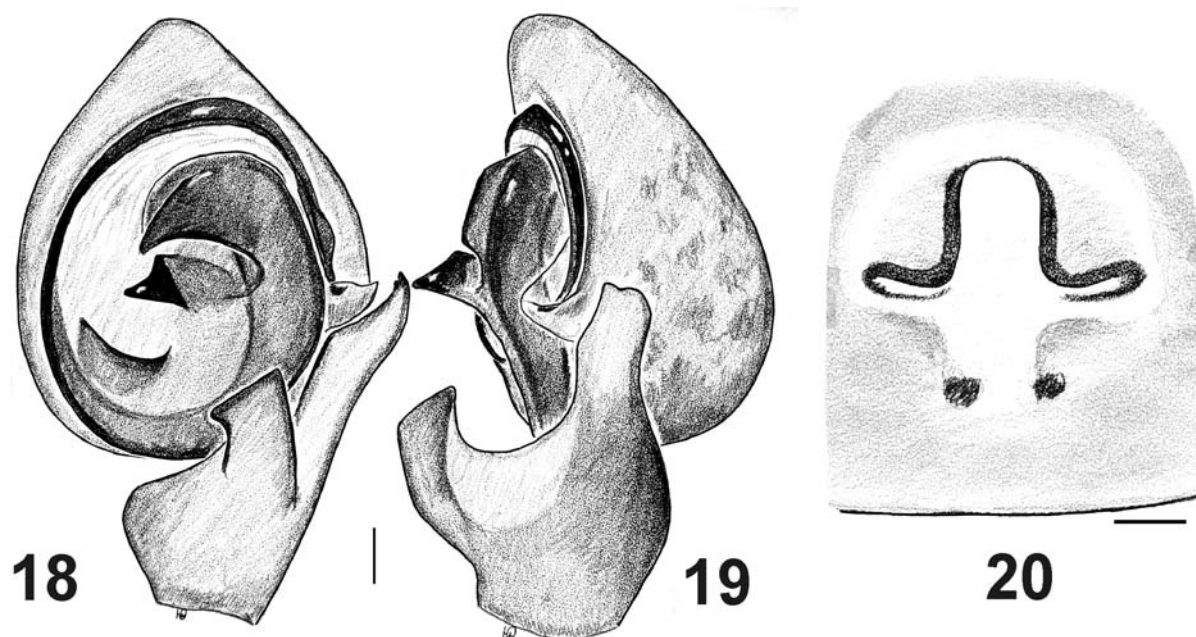
Zelotes exiguus (Müller & Schenkel, 1895)

Z. e.: Hu & Wu, 1989: 292, f. 234.1–5 (♂♀).

Z. e.: Song et al., 2004: 261, f. 152A–D (♂♀).

MATERIAL. Minoergou, 1 ♂.

COMMENTS. This species has a trans-Palaeartic northern distribution and ranges from France to Maritime Prov-



Figs 18–20. *Xysticus dzhungaricus*: 18, 19 — palp, ventral and retrolateral view respectively; 20 — epigyne, ventral view. Scale 0.1 mm.

Рис. 18–20. *Xysticus dzhungaricus*: 18, 19 — палец, снизу и ретролатерально, соответственно; 20 — эпигина, снизу. Масштаб 0,1 мм.

ince and Hokkaido, north to southern Sweden and Finland and middle Ural [Marusik et al., 2000].

Zelotes hui Platnick & Song, 1986

Z. h. Platnick & Song, 1986: 3, f. 3–4 (♀).
Z. h.: Song et al., 1999: 456, f. 266F (♀).
Z. h.: Song et al., 2004: 265, f. 155A–B (♀).

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. This species is known from Xinjiang and adjacent northeastern Kazakhstan [Song et al., 1999; Eskov & Marusik, 1995].

Zelotes longipes (L. Koch, 1866)

Z. serotinus: Roberts, 1985: 74, f. 27d (♂♀).
Z. l.: Roberts, 1995: 113, f. (♂♀).
Z. l.: Roberts, 1998: 118, f. (♂♀).
Z. l.: Song et al., 1999: 464, f. 266O, 267A (♂♀).
Z. l.: Song et al., 2004: 270, f. 159A–D (♂♀).

MATERIAL. Nantaizi, 2 ♀♀.

COMMENTS. This species apparently has a Euro-Baikalian range and occurs from Europe to Xinjiang and Buryatia. Specimens from Xinjiang were compared with these from Finland and no differences were found.

Zelotes potanini Schenkel, 1963

Z. p.: Eskov & Marusik, 1995: 63, f. 32, 37–38, 42–43 (♂♀).
Z. p.: Song et al., 1999: 464, f. 266P, 267B (♂♀).
Z. p.: Song et al., 2004: 274, f. 162A–D (♂♀).

MATERIAL. Nantaizi, 2 ♂♂ 1 ♀; Minoergou, 1 ♂.

COMMENTS. This species has a Siberio-Manchurian nemoral-steppe range and occurs from South Ural and East Kazakhstan Area northward to Central Yakutia [Marusik et

al., 1993] and eastward to Japan and southward to Shandong and Henan [Marusik et al., 2000].

BIOLOGICAL NOTES. 2 ♂♂ and 1 ♀ were collected on a sandy and stony xeromorphic slope.

LINYPHIIDAE Blackwall, 1859

Agyneta aff. *nigra* (Oi, 1960)

Fig. 38.

MATERIAL. Minoergou, 1 ♂.

COMMENTS. Apparently this is a new species related to *A. nigra* (Oi, 1960) known from Mongolia to Japan.

**Agyneta fuscipalpa* (C.L. Koch, 1836)

Meioneta fuscipalpis: Miller, 1947: 73, pl. IX, f. 7–8 (♂♀).
Meioneta fuscipalpis: Wiehle, 1956: 119, f. 204–206 (♂♀).
A. fuscipalpis: Wunderlich, 1987: 151, f. 399–402 (♂♀).

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This species is new to the fauna of China. It has a Euro-Baikalian range and occurs from Europe to the Yenisei River (including Tuva), southward to Central Asia and Bayankhongor Aimak in Mongolia [Marusik et al., 2000]. In Central Asia it is known from Turkmenistan, Uzbekistan, Kyrgyzstan and Kazakhstan [Tanasevitch, 1989].

Agyneta (*Meioneta*) spp.

MATERIAL. Nantaizi, 5 ♀♀.

COMMENTS. Females found in Xinjiang may belong to the two species listed above or to others. Identification of *Agyneta* by females from poorly studied areas is very problematic.

Alioranus avantulus Andreeva & Tyshchenko, 1970

A. a.: Tanasevitch, 1989: 124, f. 110–114 (♂♀).

A. a.: Song et al., 1999: 156, f. 85C–F (♂♀).

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This species ranges from eastern Uzbekistan, to Xinjiang [Tanasevitch, 1989; Song et al., 1999]. It is also known from Tajikistan and Kyrgyzstan [Tanasevitch, 1989].

Collinsia submissa (L. Koch, 1879)

Milleriana innerans: Holm, 1987: 160, f. 5–8 (♂♀).

C. innerans: Song et al., 1999: 163, f. 90K–L (♂♀).

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. It has a trans-Palaearctic boreo-nemoral range and occurs from Europe to Kamchatka, north to northern Sweden, middle Yenisei River and upper Kolyma, south to Azerbaijan, Nepal, Hebei, Korea and Honshu [Marusik et al., 2000].

Lepthyphantes aff. *vaginatus* Tanasevitch, 1983

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. Apparently this is a new species. It has an epigyne similar to that of *L. vaginatus* known from eastern Kazakhstan, Kyrgyzstan and Tajikistan. The female from Xinjiang has a relatively shorter epigyne.

Lepthyphantes cf. *bipartitus* Tanasevitch, 1989

MATERIAL. Nantaizi, 3 ♂♂ 2 ♀♀.

COMMENTS. Apparently this is a new species closely related to *L. bipartitus* Tanasevitch, 1989, known from Kyrgyzstan. Judging from the shape of copulatory organs of Xinjiang specimens it is likely that *L. bipartitus*, known only through males, and *L. palaeformis* Tanasevitch, 1989, known only through females, represent the same species.

BIOLOGICAL NOTES. 1 ♀ was found in a small cave like cleft in a moist ravine, surrounded by spruce forest, where water runs during melting of snow or rainfall. The rest were collected in spruce forests, beaten from spruce branches.

Lidia sp.

Fig. 1.

MATERIAL. Nantaizi, 4 ♀♀.

COMMENTS. Xinjiang specimens resemble *Lidia molesta* (Tanasevitch, 1989) from Kyrgyzstan, and *L. tarabaevi* Saaristo & Marusik, 2004, from southern Kazakhstan, but appear to represent a new species. They are slightly smaller than *L. molesta* and have the same shape of scape, but a larger posterior median plate, like that in *L. tarabaevi*.

BIOLOGICAL NOTES. All specimens were found in a small cave like cleft in a moist ravine, surrounded by spruce forest, where water runs during melting of snow or rainfall.

Megalepthyphantes kronebergi (Tanasevitch, 1989)

Lepthyphantes k. Tanasevitch, 1989: 101, f. 41–45 (♂♀).

Lepthyphantes xinjiangensis Hu & Wu, 1989: 150, f. 124.1–6 (♂♀).

Lepthyphantes k.: Song et al., 1999: 182, f. 102K–L, T (♂♀).

MATERIAL. Nantaizi, 1 ♂ 1 ♀.

COMMENTS. This species is known from Xinjiang, Uzbekistan, Tajikistan, Kazakhstan and Kyrgyzstan and ranges from the Aral Sea to Xinjiang.

BIOLOGICAL NOTES. 1 ♂ was collected in a water culvert under a road, and 1 ♀ at the opening of a marmot nest in a grazed sloping meadow.

Microlinyphia pusilla (Sundevall, 1830)

M. p.: Roberts, 1987: 164, f. 86b (♂♀).

M. p.: Roberts, 1995: 369, f. (♂♀).

M. p.: Roberts, 1998: 380, f. (♂♀).

M. p.: Song et al., 1999: 187, f. 106M–O, Q (♂♀).

MATERIAL. Nantaizi, 3 ♂♂ 9 ♀♀; Minoergou, 1 ♀.

COMMENTS. It has a circum-Holarctic polyzonal range and is known from Europe and North Africa to Caucasus and Central Asia, Xinjiang, Gansu and Honshu, northward to Chukotka Peninsula (178°E) [Marusik et al., 2000]. In the Nearctic it is distributed from Alaska to Quebec and south to Colorado [Marusik et al., 2000].

Mughiphantes sp.

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. Apparently this is a new species. Generic placement of the single female was determined by M.I. Saaristo.

BIOLOGICAL NOTES. 1 ♀ collected in a small cave like cleft in a moist ravine, surrounded by spruce forest, where water runs during melting of snow or rainfall.

Mughiphantes cf. *yadongensis* (Hu, 2001) **comb.n.**
Fig. 2.

MATERIAL. Nantaizi, 1 ♂ 4 ♀♀.

COMMENTS. Xinjiang specimens, both male and females, are similar to *M. tienschangensis* (Tanasevitch, 1986) known from south Kazakhstan and Kyrgyzstan. Female epigyne of Xinjiang specimens are indistinguishable from those in *M. tienschangensis* and *Lepthyphantes yadongensis* known from Tibet, while the male from Xinjiang is clearly different from the Central Asian species. That is why we list the Xinjiang specimens as *M. cf. yadongensis* (Hu, 2001), **comb.n.** known only through females. Because Central Asian and Chinese species are very close, we transfer the Tibetan species to *Mughiphantes yadongensis* (Hu, 2001), **comb.n.**

**Oreoneta tienshangensis* Saaristo & Marusik, 2004
Fig. 39.

O. t. Saaristo & Marusik, 2004: 248, f. 221–225, 229–231, 243, 247 (♂♀).

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This species was recently described from northern Tian Shan and was known from environments of Almaty [Saaristo & Marusik, 2004] and therefore this record from Xinjiang is the first for the whole of China.

BIOLOGICAL NOTES. 1 ♂ collected in a spruce forest, 3 June.

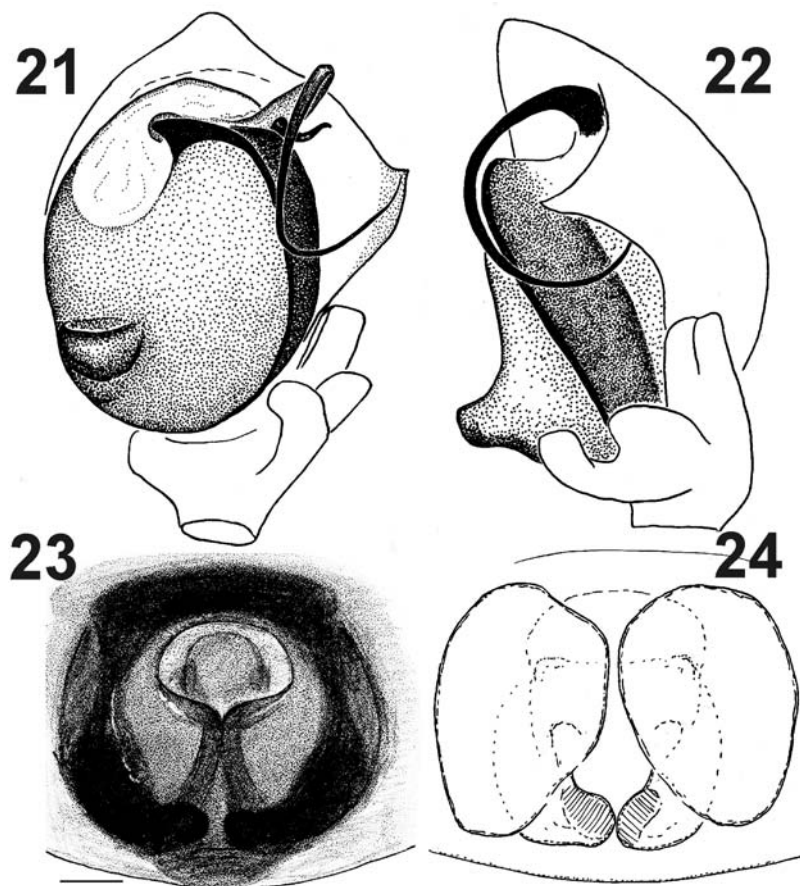
Stemonyphantes griseus (Schenkel, 1963)

S. g.: Tanasevitch, 1989: 121, f. 99–100 (♂♀).

S. g.: Song et al., 1999: 204, f. 117C–D (♂♀).

MATERIAL. Nantaizi, 1 ♂ 3 ♀♀ 7 juv.; Minoergou, 1 ♀.

COMMENTS. This species is new to Xinjiang. It was described from Gansu and is also known from Kyrgyzstan [Tanasevitch, 1989].



Figs 21–24. *Xysticus xysticiformis*: 21, 22 — palp, ventral and retrolateral view respectively; 23, 24 — epigyne, ventral and dorsal view respectively. Scale 0.1 mm.

Рис. 21–24. *Xysticus xysticiformis*: 21, 22 — палец, снизу и ретролатерально, соответственно; 23, 24 — эпигина, снизу и сверху соответственно. Масштаб 0,1 мм.

LYCOSIDAE Sundevall, 1833

Alopecosa cuneata (Clerck, 1757)

- A. c.*: Roberts, 1985: 140, f. 61d (♂♀).
A. c.: Kronstedt, 1990: 217, f. 4E, 5C, 8G, 10C, 11C, 12C, 13H-I (♂♀).
A. c.: Roberts, 1995: 224, f. (♂♀).
A. c.: Roberts, 1998: 238, f. (♂♀).
 MATERIAL. Nantaizi, 4 ♂♂ 2 ♀♀.

COMMENTS. It has a trans-Palaearctic boreo-nemoral range and occurs throughout Europe to North Ural, in Siberia throughout south belt to Kamchatka and southward to Xinjiang, Inner Mongolia and Sakhalin [Marusik et al., 2000].

Alopecosa cursor (Hahn, 1831)

- A. c.*: Lugetti & Tongiorgi, 1969: 52, f. 14a–g (♂♀).
A. c.: Hu & Wu, 1989: 188, f. 156.1–4 (♂♀).
A. c.: Roberts, 1998: 243, f. (♂♀).
A. c.: Song et al., 1999: 317, f. 186L (♀).
 MATERIAL. Nantaizi, 11 ♂♂ 10 ♀♀; Minoergou, 2 ♂♂.

COMMENTS. This species has a Mediterranean-Central Asian range and occurs from Western Europe to Xinjiang and Xizang.

Alopecosa xinjiangensis Hu & Wu, 1989

Fig. 3–8, 27, 51.

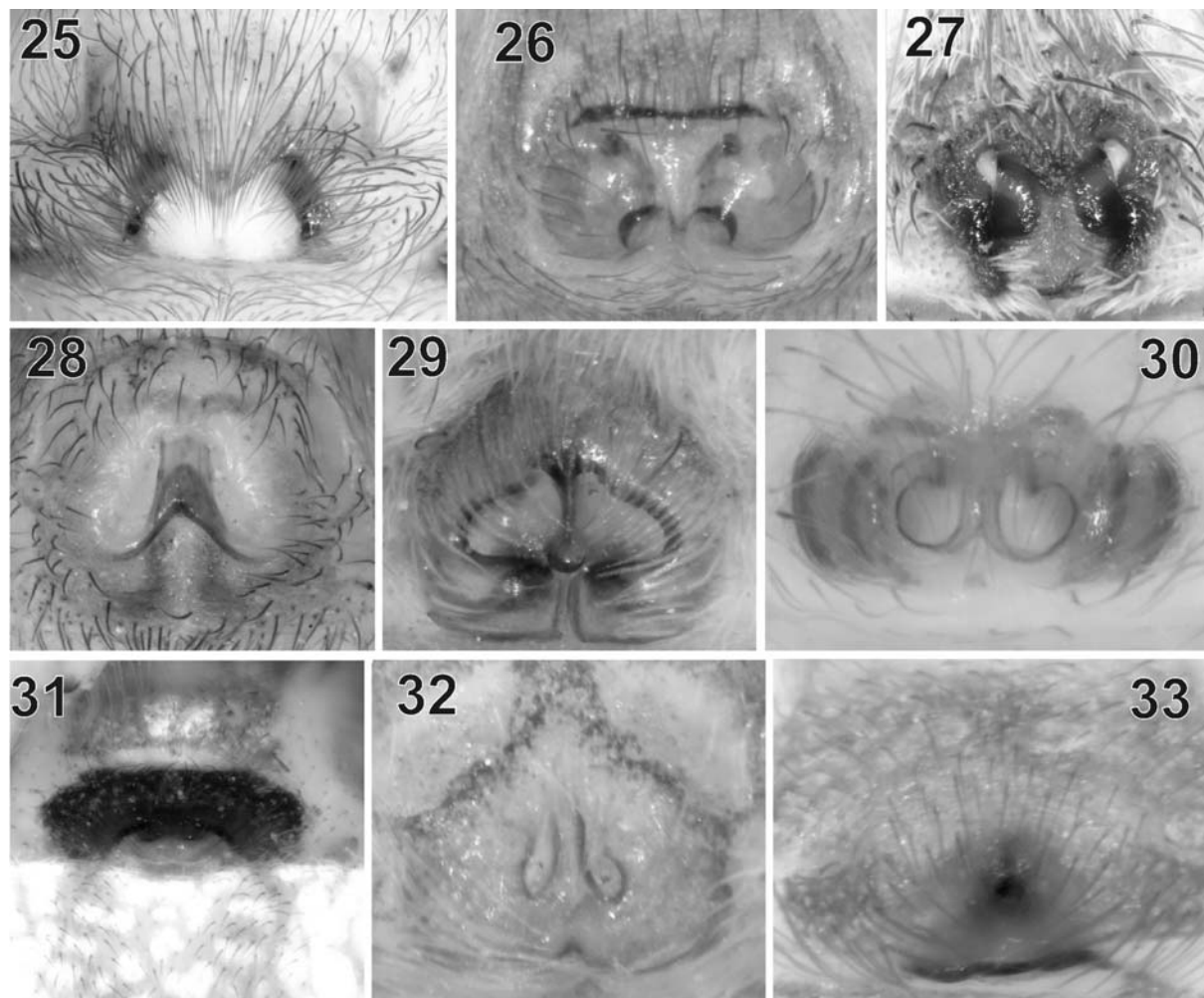
- A. x.* Hu & Wu, 1989: 195, f. 162.1–6 (♂♀).
A. x.: Song et al., 1999: 318, f. 188E, K (♂♀).
 MATERIAL. Nantaizi, 6 ♂♂ 20 ♀♀ 1 juv.; Minoergou, 1 ♂ 1 ♀.

COMPARATIVE MATERIAL. MONGOLIA: ♂♀ (Nr. 485). If the number on the label refers to Kaszab's expeditions, # 485 designates "Central aimak: Ulan-Baator, Nucht im Bogdo ul, 12 km SO von Zentrum, 1500–1800 m, 27. VIII.1965. Am alten Sammelplätzen (siehe: Nr. 293), geeinzelt vom Boden und von den Pflanzen". But possibly this number refers to another collector.

COMMENTS. It seems that this species is restricted to Xinjiang and adjacent Mongolia.

Mustelicosa dimidiata (Thorell, 1875)

- M. d.*: Marusik & Buchar, 2004: 153, f. 1–17 (♂♀).
 MATERIAL. Nantaizi, 2 ♂♂ 1 juv.
 COMMENTS. The exact range of this species is unclear. It is distributed at least from the Volga River to eastern China.
 BIOLOGICAL NOTES. 2 specimens were found indoors.



Figs 25–33. Digital photographs of epigynes of *Paracoelotes* sp. (25), *Micaria fulgens* (26), *Alopecosa xinjiangensis* (27), *Yllenus kalkamanicus* (28), *Sibirocosa alpina* (29), *Lathys* aff. *balestrerii* (30), *Metellina kirgisica* (31), *Sitticus mirandus* (32) and *Enoplognatha serratosignata* (33).

Рис. 25–33. Эпигина *Paracoelotes* sp. (25), *Micaria fulgens* (26), *Alopecosa xinjiangensis* (27), *Yllenus kalkamanicus* (28), *Sibirocosa alpina* (29), *Lathys* aff. *balestrerii* (30), *Metellina kirgisica* (31), *Sitticus mirandus* (32) и *Enoplognatha serratosignata* (33).

Pardosa bifasciata (C.L. Koch, 1834) ?

P. b.: Roberts, 1995: 216, f. (♂♀).

P. thaleri: Eskov & Marusik, 1995: 78, f. 79–80 (♂♀).

P. b.: Roberts, 1998: 229, f. (♂♀).

P. b.: Kronstedt, 2005: 37, f. 4, 6, 8, 10, 12 (♂♀).

MATERIAL. Nantaizi, 16 ♂♂ 9 ♀♀ 3 juv.

COMMENTS. It is not certain if *P. thaleri* (described from Nepal) was correctly synonymised with *P. bifasciata* (C.L. Koch, 1836). Consequently, the Xinjiang specimens may belong either to *P. bifasciata* or *P. thaleri*. In the future we are going to compare our specimens with types of *P. thaleri* and European *P. bifasciata*.

Pardosa cf. *falcata* Schenkel, 1963

MATERIAL. Nantaizi, 5 ♂♂ 7 ♀♀.

COMMENTS. This species resembles, in its color pattern, *P. azerifalcata* Marusik et al., 2003 known from Azerbaijan, but it seems to belong to a different species.

Pardosa falcata Schenkel, 1963

P. f.: Song et al., 1999: 330, f. 194J, U (♂♀).

P. f.: Hu, 2001: 187, f. 89.1–4 (♂♀).

P. f.: Song et al., 2001: 249, f. 153A–D (♂♀).

P. f.: Marusik et al., 2003: 46, f. 13–15, 19–20, 25–28, 32–34 (♂♀).

MATERIAL. Nantaizi, 5 ♂♂ 8 ♀♀.

COMMENTS. It is widely distributed in China (12 Provinces) and is known from South Mongolia, although it is possible that there are several sibling species confused with the true *P. falcata*.

Pardosa mixta (Kulczyński, 1887) *sensu* Chen & Song, 2002

MATERIAL. Nantaizi, 20 ♂♂ 21 ♀♀.

COMMENTS. This species was reported from Xinjiang as *P. mixta* (Kulczyński, 1887) by Chen & Song [2002], but it seems that the Xinjiang population represents a separate

species. *P. mixta* belongs to the very difficult *monticola* species group. All proven records of *P. mixta* are from the Alps, so it is very unlikely that it has the Alps – Xinjiang disjunction.

Pardosa sp.

MATERIAL. Nantaizi, 1 ♂; Minoergou, 2 ♂♂ 2 ♀♀.

COMMENTS. This species resembles *P. falcata* in its color pattern, but belongs to a different species.

**Sibirocosa alpina* Marusik, Azarkina & Koponen, 2004

Figs 9–17, 29.

S. a. Marusik *et al.*, 2004: 142, f. 250 (♀).

MATERIAL. Nantaizi, 11 ♂♂ 7 ♀♀.

COMPARATIVE MATERIAL. KYRGYZSTAN: 1 ♀ (ZMMU), S Kyrgyzstan, Alai Mt. Range, Taldyk Pass, 7.07.1995 (S.V. Ovchinnikov); 1 ♂ (ZMMU), Issyk-Kul' Area, 10 km S of Cholopon-Ata Town, 20.05.1995 (S.V. Ovchinnikov). KAZAKHSTAN: 2 ♂♂ 6 ♀♀ (IBPN), environs of Alma-Ata, Zailiyski Alatau Mt. Range, Bolshoye Almaatinskoye Lake, 43°05'N 7659'E, 2500 m, 3–10.07.1995 (Yu.M. Marusik); 1 ♂ (ZMMU), same locality, 29.06.1997 (S.V. Ovchinnikov).

COMMENTS. This species is new to the fauna of China and Kyrgyzstan. It was previously known only from two females collected in the environments of Almaty [Marusik *et al.* 2004]. We have on hand the previously unknown male of this species from Nantaizi and several other localities. We provide figures illustrating both sexes. Judging from the male palp (developed palea), this species is distantly related to Siberian species of this genus, and possibly requires a separate genus.

PHILODROMIDAE Thorell, 1870

Philodromus alascensis Keyserling, 1884

P. a.: Dondale & Redner, 1978: 67, f. 188–198 (♂♀).

P. a.: Hu & Wu, 1989: 315, f. 251.1–4 (♂♀).

P. a.: Song & Zhu, 1997: 181, f. 125A–C (♂♀).

P. a.: Song *et al.*, 1999: 470, f. 271A, 272A (♂♀).

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. This species has a Siberio-American polyzonal range and is known from Xinjiang and Inner Mongolia to Putorana, the Lena River mouth and East Chukotka [Marusik *et al.*, 2000]. In the Nearctic it is distributed from tundra to desert zone. Chinese populations, as well as these from East Kazakhstan Area and SW Mongolia, may belong to a different species.

BIOLOGICAL NOTES. The single specimen was found indoors on a wall.

Philodromus nanjiangensis Hu & Wu, 1989

P. n. Hu & Wu, 1989: 320, f. 254.1–3 (♀).

P. n.: Song & Zhu, 1997: 193, f. 136A–B (♀).

P. n.: Song *et al.*, 1999: 476, f. 272G (♀).

MATERIAL. Nantaizi, 1 ♂ 1 ♀ (?).

DISTRIBUTION AND COMMENTS. This species was described through males only and is known from Xinjiang. Judging from its similar appearance, the female found by us belongs to the same species. The epigyne of this female has no distinct fovea or margins. It will be illustrated in detail in a separate paper.

SALTICIDAE Blackwall, 1841

**Asianellus kazakhstanicus* Logunov & Hęcziak, 1996

Figs 45, 46.

A. k. Logunov & Hęcziak, 1996: 108, f. 6, 13, 33–34, 37, 40–42 (♂♀).

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This species is new to the fauna of China. It was previously known from the Pavlodar Area of Kazakhstan and the Novosibirsk Area of Russia [Logunov & Marusik, 2000b].

Dendryphantas fusconotatus (Grube, 1861)

D. f.: Prószyński, 1979: 305, f. 37–63 (♂♀).

D. f.: Logunov & Marusik, 1994a: 103, f. 2F–I (♀).

D. f.: Song *et al.*, 1999: 508, f. 291K, 292B, 325B (♂♀).

MATERIAL. Nantaizi, 1 ♀.

DISTRIBUTION. This species has a Siberio-Mongolian range and is distributed throughout all of Siberia east of Yenisei, Mongolia, Jilin, Shanxi, Inner Mongolia and Xinjiang (new record) [Logunov & Marusik, 2000a].

Euophrys frontalis (Walckenaer, 1802)

E. f.: Roberts, 1985: 122, f. 50c (♂♀).

E. f.: Roberts, 1995: 195, f. (♂♀).

E. f.: Logunov, 1997: 345, f. 1–15 (♂♀).

E. f.: Zabka, 1997: 46, f. 89–98 (♂♀).

E. f.: Roberts, 1998: 208, f. (♂♀).

E. f.: Metzner, 1999: 48, f. 13a–m (♂♀).

E. f.: Song *et al.*, 1999: 509, f. 292K–L, 293B–C (♂♀).

MATERIAL. Nantaizi, 1 ♂.

DISTRIBUTION AND COMMENTS. This species has a Palaearctic disjunctive range. It is unknown between West Siberia–Xinjiang and the Russian Far East. A single male found in Xinjiang belongs to the dark (black) morph.

Evarcha michailovi Logunov, 1992

E. m. Logunov, 1992: 34, f. 2A–B, 3A–B (♂♀).

E. m.: Rakov, 1997: 109, f. 14–17 (♂♀).

MATERIAL. Nantaizi, 1 ♂ 1 ♀.

DISTRIBUTION AND COMMENTS. This species has a Euro-Mongolian range, and occurs also in Central Asia south to Turkmenistan [Logunov & Marusik, 2000a]. It was previously known from Xinjiang, sub. *E. arcuata* [cf. Logunov & Marusik, 2000a]. Recently, it was reported as new to China [Su & Tang 2005] from Inner Mongolia.

**Pellenes limbatus* Kulczyński, 1895

Figs 40, 41.

P. l.: Logunov, 1992: 61, f. 6a–h (♂♀).

P. l.: Logunov *et al.*, 1999: 105, f. 10, 15, 17 (♂♀).

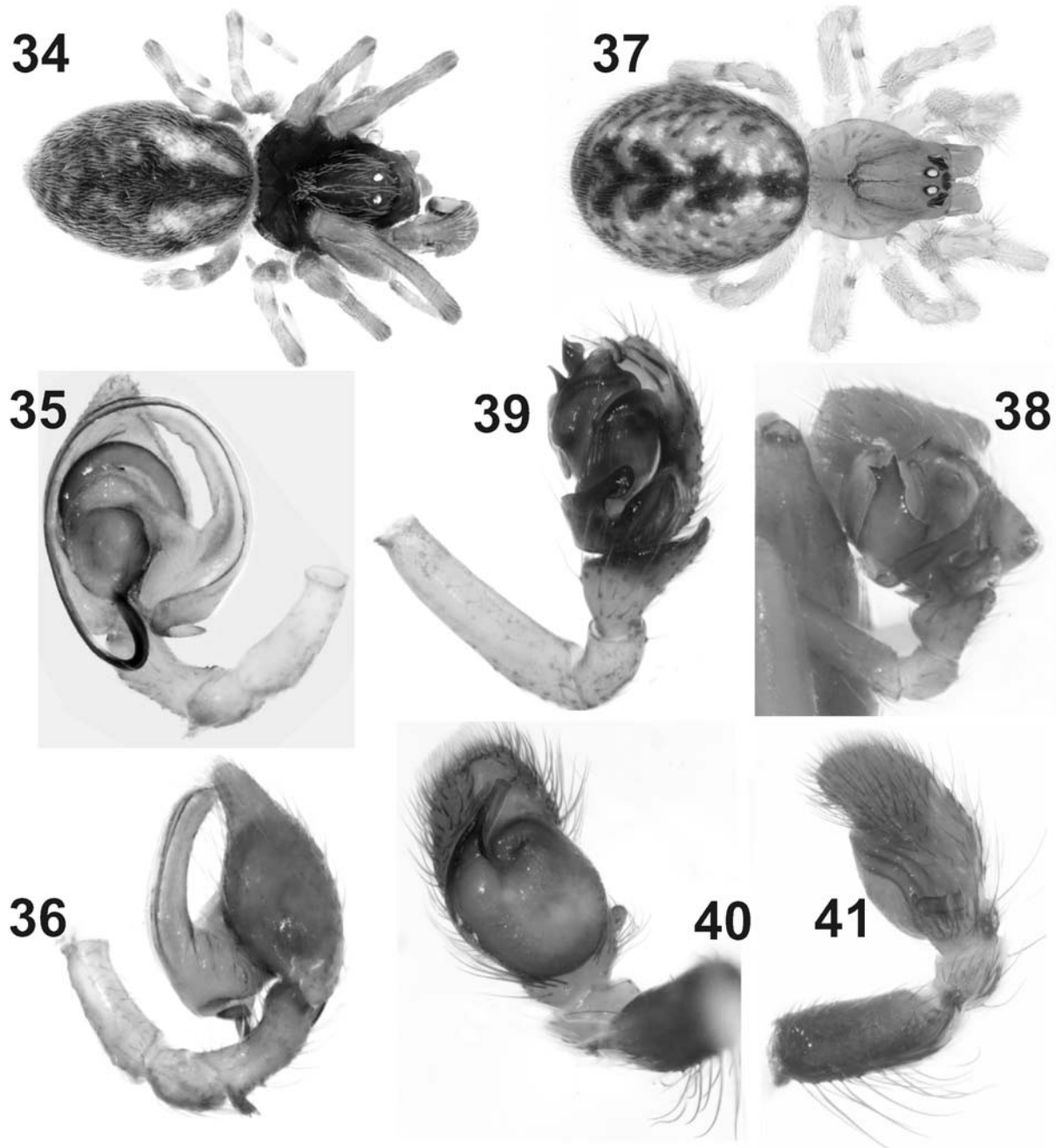
MATERIAL. Minoergou, 1 ♂.

COMMENTS. *P. limbatus* is a species new to the Chinese fauna. It has a Siberian–Central Asian range and is known from North Tian Shan north-east to Indigirka River and south to Central Mongolia [Logunov & Marusik, 2000a].

Philaeus chrysops (Poda, 1761)

P. c.: Hu & Wu, 1989: 381, f. 298.1–5 (♂♀).

P. c.: Roberts, 1995: 202, f. (♂♀).



Figs 34–41. Digital photographs of bodies and palps of *Emblyna wangi* (34–36), *Lathys* aff. *balestrerii* (37), *Agyneta* sp. (39), *Oreoneta tienshangensis* (39) and *Pellenes limbatus* (40, 41). 34 — male, dorsal view; 35, 40 — palp, ventral view; 36, 38, 39, 41 — palp, retrolateral view; 37 — female, dorsal view.

Рис. 34–41. Внешний вид и пальпус *Emblyna wangi* (34–36), *Lathys* aff. *balestrerii* (37), *Agyneta* sp. (39), *Oreoneta tienshangensis* (39) и *Pellenes limbatus* (40, 41). 34 — самец, сверху; 35, 40 — пальпус, снизу; 36, 38, 39, 41 — пальпус, ретролатерально; 37 — самка, сверху.

P. c.: Žabka, 1997: 74, f. 253–258 (♂♀).

P. c.: Roberts, 1998: 215, f. (♂♀).

P. c.: Metzner, 1999: 140, f. 105a–h, 106a–l (♂♀).

P. c.: Song et al., 1999: 537, f. 306M, 307D–E (♂♀).

MATERIAL. Nantaizi, 2 ♂♂.

COMMENTS. This species has a trans-Palaeartic range [Logunov & Marusik, 2000a].

BIOLOGICAL NOTES. 1 ♂ was collected on a sandy stony slope.

Phlegra fasciata (Hahn, 1826)

P. f.: Roberts, 1985: 130, f. 54a (♂♀).

P. f.: Roberts, 1995: 204, f. (♂♀).

- P. f.*: Logunov, 1996: 544, f. 1–2, 17–25 (♂♀).
P. f.: Žabka, 1997: 75, f. 259–264 (♂♀).
P. f.: Roberts, 1998: 218, f. (♂♀).
P. f.: Metzner, 1999: 68, f. 33a–i (♂♀).
P. f.: Song et al., 1999: 539, f. 308R, 309H–I, 316A, 328G (♂♀).
P. f.: Azarkina, 2004: 87, f. 118, 120–121 (♀).
 MATERIAL. Nantaizi, 1 ♀.

COMMENTS. It has a trans-Palaearctic range [Logunov & Marusik, 2000a] and occurs from Portugal, east to Japan, north to about 60°N (S. Fennoscandia), south to Afghanistan, Punjab in India, and to about 40°N in China (Xinjiang).

Sitticus distinguendus (Simon, 1868)

- S. d.*: Žabka, 1997: 88, f. 319–324 (♂♀).
S. d.: Roberts, 1998: 214, f. (♂♀).
S. d.: Metzner, 1999: 85, f. 50a–h (♂♀).
S. d.: Logunov & Marusik, 2000a: 270, f. 26–27, 29, 32–33 (♂♀).
 MATERIAL. Nantaizi, 3 ♂♂ 1 ♀.

COMMENTS. This species has a trans-Palaearctic range and occurs from France, east to E Yakutia and Japan, north to Tomsk and Central Yakutia (to ca. 65°N), south to Shanxi (China) (sub. *S. avocator*) [Logunov & Marusik, 2000a]. This species is very close to *S. avocator* and was earlier confused with it in China, Japan and Korea [Logunov & Marusik, 2000a]. Most probably, all records of *S. avocator* from Xinjiang [cf. Logunov & Marusik, 2000a] refer to *S. distinguendus*.

**Sitticus mirandus* Logunov, 1993
 Figs 32, 42–44.

- S. m.* Logunov, 1993a: 4, 10–14, f. 2, 12, 34–39 (♂♀).
 MATERIAL. Nantaizi, 1 ♂ 1 ♀.

DISTRIBUTION AND COMMENTS. This species is new to the fauna of China. It has a Central Asian range and occurs in mountain regions of Central Asia and South Siberia (Altai, Tuva, Kyrgyzstan, South and East Kazakhstan) [Logunov & Marusik, 2000a]. It seems that it was already reported from Xinjiang (Tacheng, 46°45'N, 82°58'E) by Hu & Wu [1989] under the name *S. penicillatus* [cf. Logunov & Marusik, 2000a].

Yaginumaella sp.

- MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This is the first record of the genus from Xinjiang. Our specimens resemble *Ptocasius variegatus* Logunov, 1995 and *Yaginumaella wuermli* Žabka, 1981. The former species was reported from Tibet by Hu [2001], but judging from the figures it looks like it was confused with other species. It is possible that our specimen belongs to an undescribed species.

**Yllenus kalkamanicus* Logunov & Marusik, 2000
 Figs 28, 47, 48.

- Y. k.* Logunov et Marusik, 2000b: 275–277, f. 44–47 (♂♀).
Y. k.: Logunov & Marusik, 2003: 135, f. 42–43, 62–63, 77, 462–465 (♂♀).
 MATERIAL. Minoergou, 1 ♂ 1 ♀.

COMMENTS. This species is new to the fauna of China. Previously it was known only from the Pavlodar and East-Kazakhstan areas of Kazakhstan [Logunov & Marusik, 2003]. Males of the *Y. hamifer*-group are very similar. The female from Xinjiang differs slightly from females from Kazakhstan. Therefore it is not absolutely certain if Chinese

specimens represent the same species. To answer this question more material is needed.

TETRAGNATHIDAE Menge, 1866

**Metellina kirgisica* (Bachwalow, 1974)
 Figs 31, 52.

- Meta kirgisicus* Bachwalow, 1974: 101, f. 6–7 (♀).
Meta kirgisicus Bachwalow, 1982: 136, f. 1 (♀).
Meta kirgisicus Bachwalow, 1983: 86, f. 1 (♀).
 MATERIAL. Nantaizi, 1 ♀.

DISTRIBUTION AND COMMENTS. This species is new to the fauna of China. Previously it was known only from Central Asia [cf. Mikhailov, 1997]. This species was described three times as new under the same name and based on the same specimens.

BIOLOGICAL NOTES. The single specimen was found in late April 2005 as a subadult female in its orbweb at the opening of a marmot burrow in a grazed sloping meadow. The specimen was reared to adulthood in May.

Metleucauge sp.

- MATERIAL. Nantaizi, 1 juv.

COMMENTS. While it is impossible to identify members of this genus as juveniles, it is probable that our specimen belongs to *M. dentipalpis* (Kroneberg, 1875) because it is the single species of the genus that occurs and is widely distributed in Central Asia [cf. Mikhailov, 1997].

Tetragnatha pinicola L. Koch, 1870

- T. p.*: Wiehle, 1963: 18, f. 20–30 (♂♀).
T. p.: Roberts, 1985: 198, f. 88b, 89b (♂♀).
T. p.: Roberts, 1995: 303, f. (♂♀).
T. p.: Roberts, 1998: 317, f. (♂♀).
T. p.: Song et al., 1999: 222, f. 126F, S, 128I–L (♂♀).
T. p.: Zhu et al., 2003: 168, f. 87A–G, 88A–G (♂♀).
 MATERIAL. Nantaizi, 1 ♂ 1 ♀.

COMMENTS. It has a trans-Palaearctic boreo-nemoral range and is known from western Europe to Kamchatka, north to Lapland, Cispolar Ural, Lena River mouth, and south to Azerbaijan and Shikoku [Marusik et al., 2000].

THERIDIIDAE Sundevall, 1833

Dipoena yutian Hu & Wu, 1989

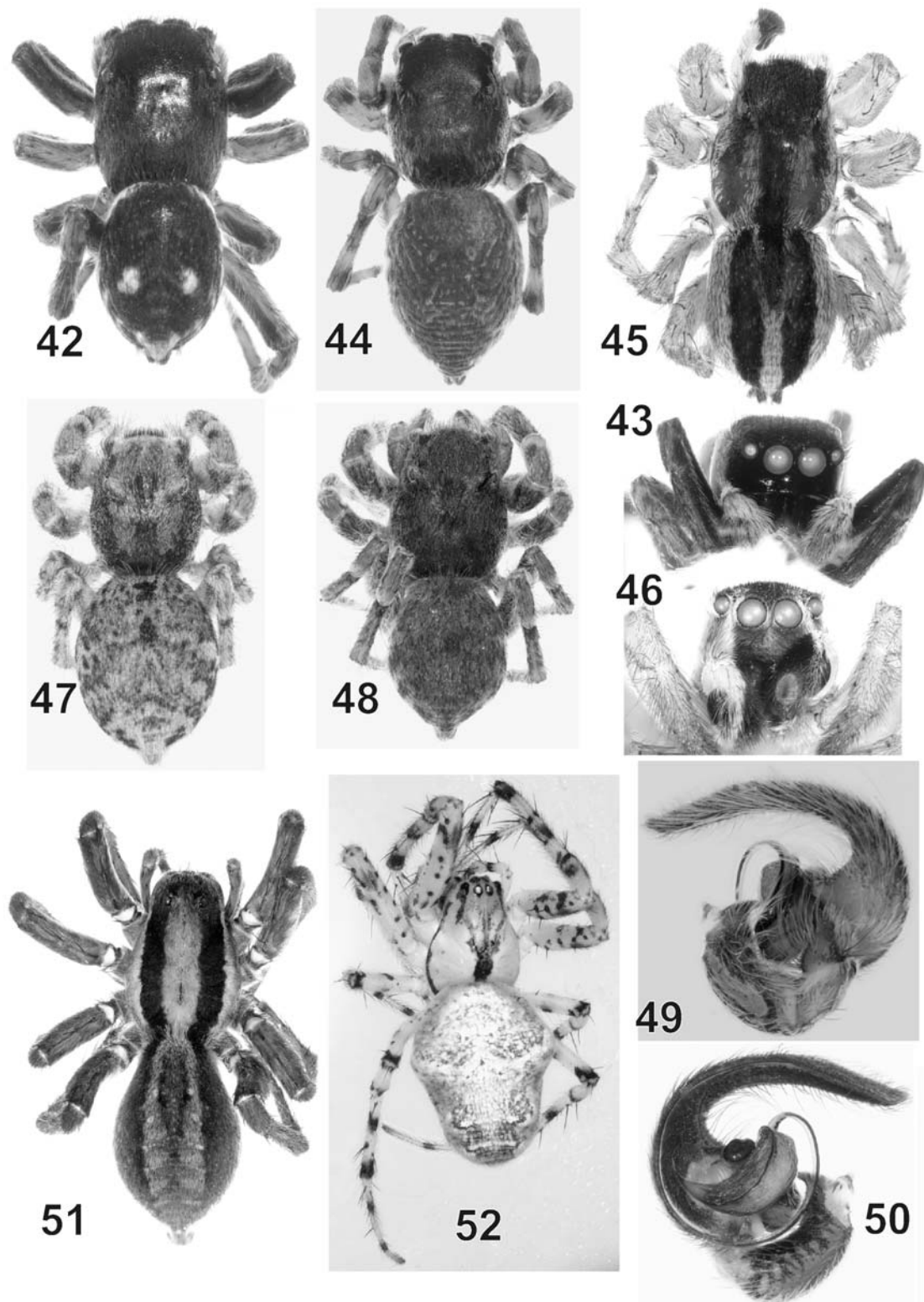
- D. y.* Hu & Wu, 1989: 120, f. 93.1–6 (♂♀).
D. y.: Zhu, 1998: 249, f. 165A–E (♂♀).
D. y.: Song et al., 1999: 112, f. 57G–H, L–M (♂♀).
 MATERIAL. Nantaizi, 2 ♂♂ 1 ♀.

COMMENTS. So far, this species is known only from Xinjiang [Song et al., 1999], although its occurrence in adjacent Kazakhstan and Kyrgyzstan is very probable.

Enoplognatha gramineusa Zhu, 1998

- E. g.* Zhu, 1998: 307, f. 206A–F (♂♀).
E. g.: Song et al., 1999: 118, f. 59A–B, I–J (♂♀).
 MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This species is new to Xinjiang. It was described from Inner Mongolia and was, questionably, reported from South Siberia and Mongolia by Marusik et al. [2000]. A survey of east Palaearctic *Enoplognatha* [Gromov, Marusik



Figs 42–50. Digital photographs of bodies and palps of *Sitticus mirandus* (42–44); *Asianellus kazakhstanicus* (45, 46), *Yllenus kalkamanicus* (47–50), *Alopecosa xinjiangensis* (51) and *Metellina kirgisica* (52): 42, 45, 48 — male, dorsal view; 43, 46 — male, frontal view; 44, 47, 51, 52 — female, dorsal view; 49, 50 — palp, retrolateral and prolaternal view, respectively.

Рис. 42–50. Внешний вид и пальпус и *Sitticus mirandus* (42–44); *Asianellus kazakhstanicus* (45, 46), *Yllenus kalkamanicus* (47–50), *Alopecosa xinjiangensis* (51) и *Metellina kirgisica* (52): 42, 45, 48 — самец, сверху; 43, 46 — самец, спереди; 44, 47, 51, 52 — самка, сверху; 49, 50 — пальпус, сбоку и пролатерально, соответственно.

& Koponen, unpublished] reveals that South Siberian and Mongolian records refer to another undescribed species.

Enoplognatha serratosignata (L. Koch, 1879)

Fig. 33.

E. jacksoni: Wunderlich, 1976: 102, f. 17–22 (♂♀).

E. s.: Bosmans & Van Keer, 1999: 236, f. 108–112 (♂♀).

MATERIAL. Minoergou, 1 ♀.

COMMENTS. This species is new to Xinjiang. It has a trans-Palaeartic boreo-montane range and is known from Switzerland to Kolyma River, north to Finland and Kolyma River mouth, and southward to Mongolia and Gansu [Marusik et al., 2000].

Steatoda albomaculata (De Geer, 1778)

S. a.: Roberts, 1985: 178, f. 79d (♂♀).

S. a.: Roberts, 1995: 274, f. (♂♀).

S. a.: Zhu, 1998: 341, f. 228A–E (♂♀).

S. a.: Roberts, 1998: 289, f. (♂♀).

S. a.: Song et al., 1999: 128, f. 67A–B, I–J (♂♀).

MATERIAL. Nantaizi, 2 ♀♀.

COMMENTS. It has a circum-Holarctic polyzonal range and is known from almost all of Palaeartic except Siberia north of 67°N. In the Nearctic it occurs from Yukon Territory to New Brunswick, south to California and Connecticut [Marusik et al., 2000].

Steatoda castanea (Clerck, 1757)

S. c.: Hu & Wu, 1989: 129, f. 102.1–3 (♂♀).

S. c.: Roberts, 1995: 275, f. (♂♀).

S. c.: Zhu, 1998: 333, f. 223A–E (♂♀).

S. c.: Roberts, 1998: 289, f. (♂♀).

S. c.: Song et al., 1999: 128, f. 67G–H, N–O (♂♀).

MATERIAL. Nantaizi, 2 ♀♀ 1 juv.

COMMENTS. This species has a Palaeartic distribution and was recently introduced to Canada [Platnick, 2006].

BIOLOGICAL NOTES. One specimen was collected in a culvert under a road. Specimens were also seen in rock crevices and indoors at windowsills.

Theridion impressum L. Koch, 1881

T. i.: Roberts, 1985: 184, f. 81e (♂♀).

T. i.: Roberts, 1995: 282, f. (♂♀).

T. i.: Zhu, 1998: 161, f. 100A–E (♂♀).

T. i.: Roberts, 1998: 296, f. (♂♀).

T. i.: Song et al., 1999: 138, f. 74A–B, K–L (♂♀).

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. It has a trans-Palaeartic-NW Nearctic polyzonal range and occurs throughout Eurasia from southern tundras to deserts, southward to Himalayas [Marusik et al., 2000]. In the Nearctic it is known from Alaska to western Northwest Territories and southward to northern Alberta [Dondale et al., 1997].

“*Theridion*” sp.

MATERIAL. Nantaizi, 9 ♂♂ 14 ♀♀.

COMMENTS. This is, apparently, a new species belonging to an undescribed genus. In general appearance it resembles “*Theridion*” *ohlerti*, but it has entirely different copulatory organs. According to A. Gromov (personal communication) there are several species in this group all of which are known from mountainous areas of Central Asia.

BIOLOGICAL NOTES. Most of the specimens were collected in spruce forests by beating lower branches of spruce. All were collected between 11 and 26 June.

THOMISIDAE Sundevall, 1833

Diaea suspiciosa O. Pickard-Cambridge, 1885

D. xinjiangensis Song & Hu, 1986: 350, f. 1–4 (♂♀).

D. xinjiangensis: Hu & Wu, 1989: 332, f. 264.1–4 (♂♀).

D. s.: Marusik, 1993b: 459, f. 9–10 (m, Sf).

D. xinjiangensis: Song & Zhu, 1997: 152, f. 108A–D (♂♀).

D. s.: Song et al., 1999: 481, f. 277E, N (♂♀).

MATERIAL. Nantaizi, 3 ♀♀ 2 juv.

COMMENTS. Central Asian – Mongolian range: from Uzbekistan [Mikhailov, 1997] via Xinjiang [Song et al., 1999] eastward to Mongolia.

BIOLOGICAL NOTES. All but one were collected by beating spruce branches and bushes at a forest edge.

Misumena vatia (Clerck, 1757)

M. v.: Roberts, 1985: 98, f. 38d (♂♀).

M. v.: Roberts, 1995: 154, f. (♂♀).

M. v.: Roberts, 1998: 163, f. (♂♀).

M. v.: Song et al., 1999: 482, f. 274M, 278A, F (♂♀).

MATERIAL. Nantaizi, 2 ♂♂ 2 ♀♀ 1 juv.

COMMENTS. It has a circum-Holarctic polyzonal range and occurs from Europe and North Africa northeast to Chukotka and southward to Tajikistan, Shaanxi and Kyushu [Marusik et al., 2000]. In the Nearctic it is known throughout all of USA and Canada southward to Mexico [Dondale & Redner, 1978]. Specimens from Xinjiang were compared with Finnish ones, and no differences were found.

Ozyptila scabricula (Westring, 1851)

O. s.: Roberts, 1985: 104, f. 41d (♂♀).

O. s.: Roberts, 1995: 165, f. (♂♀).

O. s.: Roberts, 1998: 175, f. (♂♀).

O. s.: Song et al., 1999: 484, f. 280P (♀).

O. s.: Hu, 2001: 346, f. 209.1–4 (♂♀).

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. It is new to Xinjiang. This species has an Euro-Baikalian boreo-nemoral range and is known from Europe south to Azerbaijan, Uzbekistan, eastward to Cisbaikalia and Sichuan [Marusik et al., 2000]. It is possible that specimens reported from Sichuan belong to an undescribed sibling species.

Xysticus baltistanus Caporiacco, 1935

Figs 59, 60.

X. dondalei Marusik, 1988: 1480, f. 7.1–7 (♂♀).

X. albomarginatus Song & Zhu, 1997: 68, f. 39A–C (♀).

X. albomarginatus: Song et al., 1999: 501, f. 284O (♀).

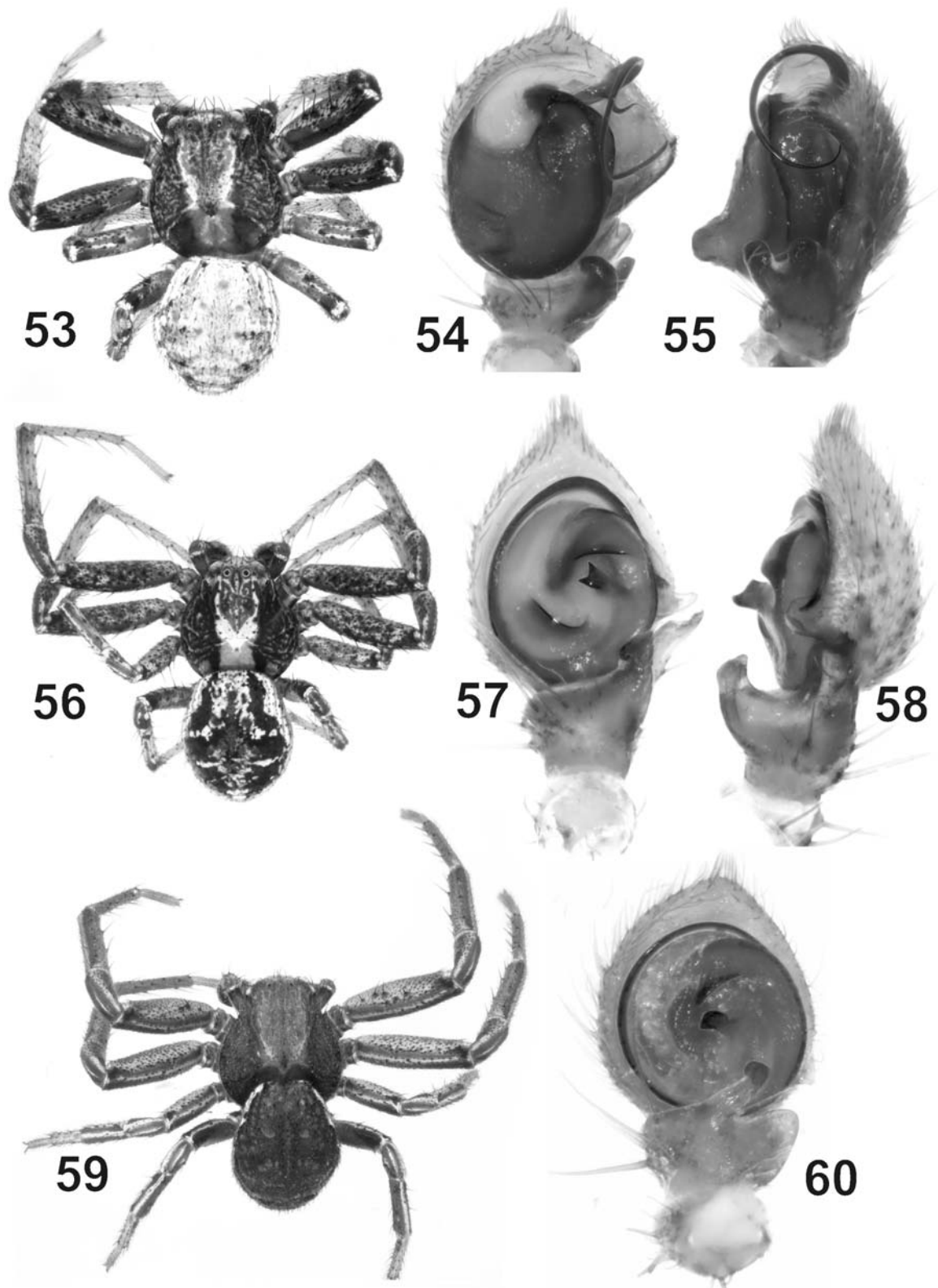
MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This species has an East Palaeartic polyzonal range and occurs from Karakoram Mt. Range in the south to North Tian Shan, eastward to Kolyma River mouth, southward to Sichuan [Marusik et al., 2000].

Xysticus pseudocristatus Azarkina & Logunov, 2001

X. p. Azarkina & Logunov, 2001: 134, f. 2–15 (♂♀).

MATERIAL. Nantaizi, 9 ♂♂; Minoergou 1 ♂.



Figs 53–60. Digital photographs of males of *Xysticus xysticiformis* (53–55), *X. dzhungaricus* (56–58) and *X. baltistanus* (59, 60): 53, 56, 59 — body, dorsal view; 54, 57, 60 — palp, ventral view; 55, 58 — palp, retrolateral view.

Рис. 53–60. Самец *Xysticus xysticiformis* (53–55), *X. dzhungaricus* (56–58) и *X. baltistanus* (59, 60): 53, 56, 59 — внешний вид, сверху; 54, 57, 60 — пальпус, снизу; 55, 58 — пальпус, ретролатерально.

COMMENTS. This species is distributed through the mountains of Central Asia, from Uzbekistan east to Mongolia and all records of *X. cristatus* or *X. audax* from western China refer to this species [Azarkina & Logunov, 2001].

Xysticus dzhungaricus Tyschchenko, 1965
Figs 18–20, 56–58.

X. kiritschenkoi: Marusik & Logunov, 1990: 42, f. 29–31 (♂♀).

X. piceana: Song & Zhu, 1997: 100, f. 66A–B (♀).

X. piceana: Song et al., 1999: 503, f. 287C (♀).

MATERIAL. Nantaizi, 12 ♂♂ 5 ♀♀.

COMMENTS. This species has an East Palaearctic nemoral range and is known from Central Asia east of 73°E (Tajikistan-Pavlodar Area), southward to Himachal Pradesh, north India, eastward to Khabarovsk Province in Siberia, southward to Xinjiang and Mongolia [Marusik et al., 2000].

Xysticus xysticiformis (Caporiacco, 1935)
Figs 21–24, 53–55.

X. furcillifer Schenkel, 1936: 140, f. 49 (♀).

X. x.: Marusik & Logunov, 1995: 161, f. 57–60 (♂♀).

MATERIAL. Nantaizi, 1 ♂.

COMMENTS. This is the first record of the species in Xinjiang. It has a Central Asian mountainous range and has previously been recorded from Karakoram, Tajikistan, Kyrgyzstan and south Gansu [Marusik & Logunov, 1995].

TITANOECIDAE Lehtinen, 1967

Titanoeca nivalis Simon, 1874

T. silvicola: Leech, 1972: 98, f. 179–180, 376, 381 (♂♀).

T. n.: Thaler, 1981: 127, f. 72 (♂).

T. n.: Marusik, 1995: 126, f. 3, 9–10, 17 (♂♀).

MATERIAL. Nantaizi, 1 ♀.

COMMENTS. It is new to Xinjiang. This species has a trans-Palaearctic-W Nearctic boreo-montane range and occurs from the European highlands to northern Fennoscandia, in Siberia from Altai northeast to upper Kolyma [Marusik et al., 2000]. In the Nearctic it is known from Alaska to Manitoba, south to Arizona and New Mexico [Marusik et al., 2000]. In China this species was reported sub *T. flavicomis* L. Koch, 1872.

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