

A contribution on the gnaphosid spider fauna (Araneae: Gnaphosidae) of east Kazakhstan

Добавление к фауне пауков-гнафозид (Araneae: Gnaphosidae) восточного Казахстана

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ABSTRACT. A new genus *Heser* gen.n. (type species: *H. malefactor* sp.n.) and seven new species: *Drassodes charitonovi* sp.n. (♂♀), *D. cupa* sp.n. (♂), *Gnaphosa ketmer* sp.n. (♀), *Haplodrassus rugosus* sp.n. (♂), *Heser malefactor* sp.n. (♂♀), *Micaria seymuria* sp.n. (♀) and *Sidydrassus rogue* sp.n. (♂) are described. Two new combinations are proposed: *H. aradensis* (Levy, 1998) comb.n. and *H. infumatus* (O. Pickard-Cambridge, 1872) comb.n., both ex. *Zelotes*. *Berlandina xinjiangensis* Hu et Wu, 1989 is synonymized with *B. spasskyi* Ponomarjov, 1979. Three species: *Aphantaulax seminigra* Simon, 1878, *Berlandina apscheronica* Dunin, 1984 and *B. spasski* Ponomarjov, 1979, are redescribed on the basis of new specimens from the region of Lake Zaisan and Uigursky district, Almaty area. Three species, *Berlandina apscheronica* Dunin, 1984, *Micaria tuvensis* Danilov, 1993 and *Zelotes latreillei* (Simon, 1878), are recorded from east Kazakhstan for the first time. In addition, the distribution of 12 species in east Kazakhstan is refined.

РЕЗЮМЕ. Описан новый род *Heser* gen.n. (типовой вид: *H. malefactor* sp.n.) и семь новых видов: *Drassodes charitonovi* sp.n. (♂♀), *D. cupa* sp.n. (♂), *Gnaphosa ketmer* sp.n. (♀), *Haplodrassus rugosus* sp.n. (♂), *Heser malefactor* sp.n. (♂♀), *Micaria seymuria* sp.n. (♀) и *Sidydrassus rogue* sp.n. (♂). Предложено две новые комбинации: *H. aradensis* (Levy, 1998) comb.n. и *H. infumatus* (O. Pickard-Cambridge, 1872) comb.n., обе ex. *Zelotes*. *Berlandina xinjiangensis* Hu et Wu, 1989 синонимизирована с *B. spasskyi* Ponomarjov, 1979. Три вида — *Aphantaulax seminigra* Simon, 1878, *Berlandina apscheronica* Dunin, 1984, *B. spasski* Ponomarjov, 1979 — переописаны на основе нового материала из района озера Зайсан и Уйгурского района, Алматинской области. Три вида, а именно: *Berlandina apscheronica* Dunin, 1984; *Micaria tuvensis* Danilov, 1993; and *Zelotes latreillei* (Simon, 1878), впервые указаны для восточного Казахстана. Кроме того уточнено распространение в восточном Казахстане 12 видов.

KEY WORDS: spiders, Gnaphosidae, new genus, new species, fauna, east Kazakhstan.

КЛЮЧЕВЫЕ СЛОВА: пауки, Gnaphosidae, новый род, новые виды, фауна, восточный Казахстан.

Introduction

The gnaphosid spider fauna of Kazakhstan comprises more than 100 species in 24 genera

[Mikhailov, 1997]. The majority of the material considered in this paper was collected by D.E. Charitonov and A.G. Ovsyannikov during their expedition to Lake Zaisan (east Kazakhstan) in

1936. This gnaphosid collection was brought to the Department of Zoology of the Perm State University where it has hitherto been unstudied. In addition, the gnaphosid collections taken by Dr A.A. Zyuzin (Alma-Ata, Kazakhstan) from several localities around Lake Zaisan in 1998 and by Dr S.I. Golovatch (Moscow, Russia) from East Kazakhstan area and Uigursky district of Almaty area in 2001 were also examined.

Most of the studied material is deposited in the collection of the Department of Zoology of the Perm State University (PSU). Some of the type specimens are deposited in the Zoological Museum of the Moscow University (ZMMU) and the Zoological Museum of the Zoological Institute, St. Petersburg (ZIN).

The following abbreviations are used in the text: a = apical, d = dorsal, p = prolateral, r = retrolateral, v = ventral. Chaetotaxy is as follows: basal-medial-apical spines. For example, tibia I v1-2(1)-2(a) means that tibia I possesses one basal, two (or one) medial and two apical ventral spines. All measurements are in mm.

Descriptions

Drassodes charitonovi sp.n.

Figs 30–35.

MATERIAL. Holotype ♂ (PSU), Kazakhstan, East Kazakhstan area, Lake Zaisan, Topolev Cape, in house, 16.07.1936, D.E. Charitonov.

Paratypes: 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, Aletay passover, under stones, 6.08.1936, D.E. Charitonov; 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, Kara-Chek Mt., under stones, 1936, A.G. Ovsyannikov.

ETYMOLOGY. The specific name is a patronym in honour of the collector, the famous Russian arachnologist, the late Prof. D.E. Charitonov.

DIAGNOSIS. *D. charitonovi* sp.n. seems to be closest to *D. serratidens* Schenkel, 1963, but can be distinguished by the monochromous abdomen (a clear pattern in *D. serratidens*), shape of the retrolateral tibial apophysis and the median apophysis in males, and in females by the foveal margins and the spermathecal structure (cf. figs 19–25 in Marusik & Logunov [1995]).

DISTRIBUTION. The type locality only.

DESCRIPTION. Male (holotype). Total length 10.05. Carapace 4.55 long, 3.10 wide, brown. Sternum yellow–brown. Abdomen yellow. Legs and palps yellow–brown. Chelicerae brown. Palpal femur with one dorsomedian spine and a distal group of three connivent dorsodistal spines. Femur II 3.25 long. Leg spination: femora I, II d1-1-0, p0-1-1; III, IV d1-1-0 p0-1-1, r0-1-1; tibiae I, II v2-0-2; III p2-2-2(a), r1-1-1, v2-2-2(a); IV d1-1-0, p1-1-1, r1-1-1, v2-2-2(a); metatarsi I, II v2-0-0; III, IV p1-2-2, r2-2-2, v2-2-2(a). Retrolateral tibial apophysis long, flat and narrow (Figs 1, 2). Embolus aciform, slightly curved, situated laterally; median apophysis broad, transverse and with a pointed tip (Fig. 1).

Female. Total length 10.05. Carapace 4.55 long, 3.10 wide, yellow–brown. Sternum yellow–brown, with dark thin margins. Abdomen yellow to grey–yellow. Legs and palps yellow–brown. Chelicerae brown. Femur II 3.55 long. Spination of the palpal femora and legs as in male. Epigyne with a broad median plate (Fig. 34). Spermathecae widely separated and sinuous (Fig. 35).

Female. Total length 10.05. Carapace 4.55 long, 3.10 wide, yellow–brown. Sternum yellow–brown, with dark thin margins. Abdomen yellow to grey–yellow. Legs and palps yellow–brown. Chelicerae brown. Femur II 3.55 long. Spination of the palpal femora and legs as in male. Epigyne with a broad median plate (Fig. 34). Spermathecae widely separated and sinuous (Fig. 35).

Drassodes cupa sp.n.

Figs 1–3.

MATERIAL. Holotype ♂ (ZMMU), Kazakhstan, East Kazakhstan area, Lake Zaisan, Mambet creek, under stones, 1936, A.G. Ovsyannikov.

ETYMOLOGY. The specific epithet is derived from the Latin word ‘cupa’ meaning ‘ladle’, a characteristic of the median apophysis.

DIAGNOSIS. The new species is most similar to *D. pubescens* (Thorell, 1856) (see Figs 38–40), but can easily be distinguished by the curved embolus (straight embolus in *D. pubescens*), the pointed tip of the median apophysis (bifid in *D. pubescens*) and the long and narrow tibial apophysis (short and bifid apically in *D. pubescens*).

DISTRIBUTION. The type locality only.

DESCRIPTION. Male (holotype). Total length 10.05. Carapace 4.55 long, 3.10 wide, brown. Sternum yellow–brown. Abdomen yellow. Legs and palps yellow–brown. Palpal femur with one dorsomedian spine and a distal group of three connivent dorsodistal spines. Femur II 3.25 long. Leg spination: femora I, II d1-1-0, p0-1-1; III, IV d1-1-0 p0-1-1, r0-1-1; tibiae I, II v2-0-2; III p2-0-1, r1-1-1, v2-2-2(a); IV d1-1-0, p1-1-1, r1-1-1, v2-2-2(a); metatarsi I, II v2-0-0; III, IV p1-2-2, r2-2-2, v2-2-2(a). Retrolateral tibial apophysis long, flat and narrow (Figs 1, 2). Embolus aciform, slightly curved, situated laterally; median apophysis broad, transverse and with a pointed tip (Fig. 1).

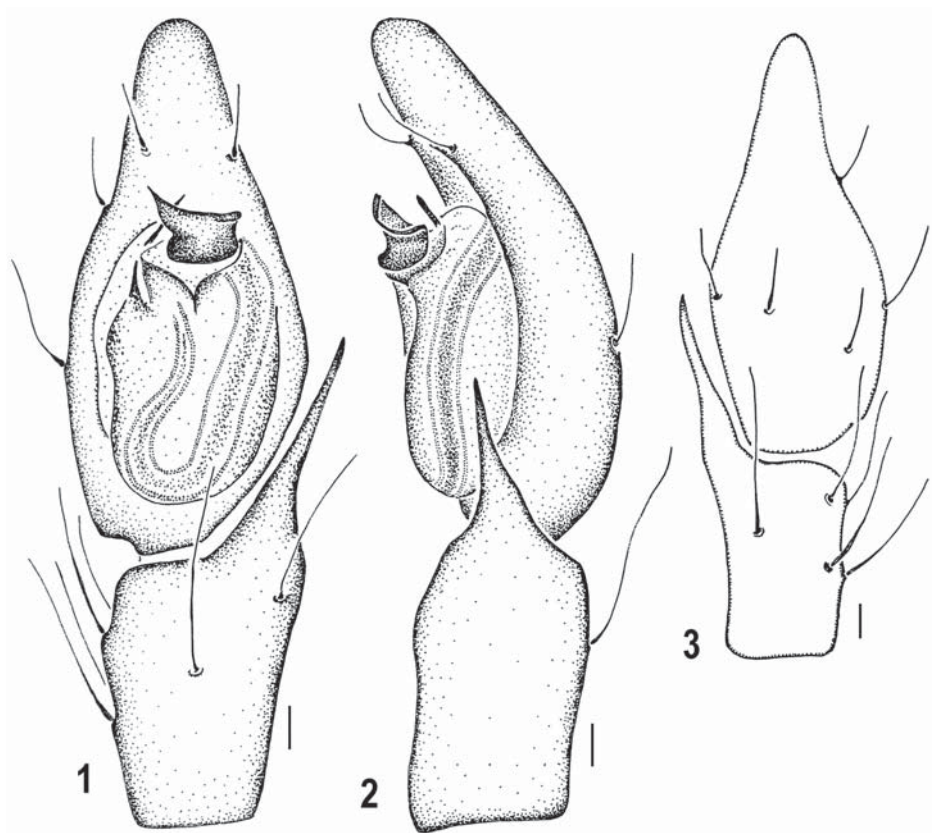
Female unknown.

Gnaphosa ketmer sp.n.

Figs 4, 5.

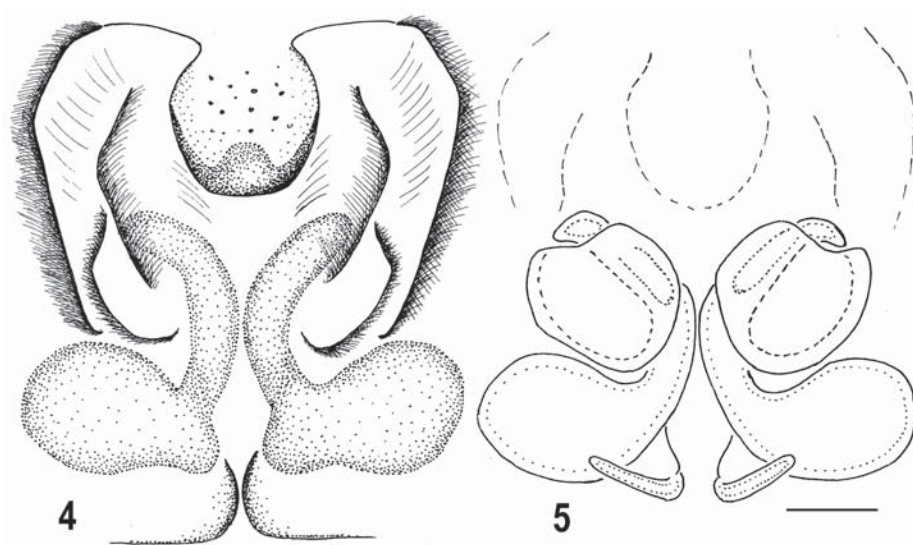
MATERIAL. Holotype ♀ (ZMMU), Kazakhstan, Almaty area, Uigursky district, c. 5 km south-east of Kyrghyzsai (= Podgornoe), Ketmen Mt. Range, 1500–1900 m a.s.l., *Picea–Betula–Populus* forest, 1–2.06.2001, S.I. Golovatch.

ETYMOLOGY. The specific name is a noun in apposition taken from the type locality.



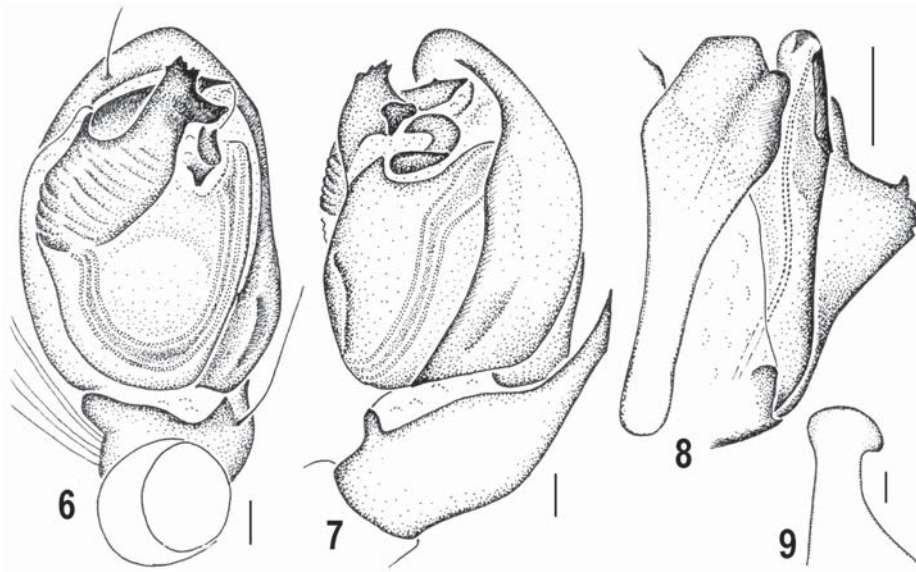
Figs 1–3. *Drassodes cupa* sp.n.: 1 — male palp, ventral view; 2 — male palp, lateral view; 3 — tibia and cymbium of male palp, dorsal view. Scale: 0.1 mm.

Рис. 1–3. *Drassodes cupa* sp.n.: 1 — пальпа самца, вид снизу; 2 — пальпа самца, вид сбоку; 3 — голень и цимбиум пальпы самца, вид сверху. Масштаб: 0,1 мм.



Figs 4–5. *Gnaphosa ketmer* sp.n.: 4 — epigyne; 5 — spermathecae. Scale: 0.1 mm.

Рис. 4–5. *Gnaphosa ketmer* sp.n.: 4 — эпигина; 5 — сперматека. Масштаб: 0,1 мм.



Figs 6–9. *Haplodrassus rugosus* sp.n.: 6 — male palp, ventral view; 7 — male palp, lateral view; 8 — embolus, dorsal view; 9 — apical part of male palpal tibia, dorsal view. Scale: 0.1 mm.

Рис. 6–9. *Haplodrassus rugosus* sp.n.: 6 — палпы самца, вид снизу; 7 — палпы самца, вид сбоку; 8 — эмболюсный отдел, вид сверху; 9 — вершина голени палпы самца, вид сверху. Масштаб: 0,1 мм.

DIAGNOSIS. Based on the wide epigynal scape, this new species probably belongs to the *rufula* group [sensu Ovtsharenko *et al.*, 1992], but in the structure of the spermathecae it is most similar to *G. ilika* Ovtsharenko *et al.*, 1992 from the *nigerrima* group. *Gnaphosa ketmersp.n.* is easily distinguished from other members of the *rufula* species group by the wider median ducts and from *G. ilika* by the wider anterior region of epigynal atrium.

DISTRIBUTION. The type locality only.

DESCRIPTION. Female (holotype). Total length 9.30. Carapace 3.80 long, 2.75 wide, grey–brown. Sternum grey–yellow. Abdomen grey. Femur II 1.75 long. Legs and palps grey–yellow. Chelicerae brown. Palpal femur with one dorsomedian spine and two dorsodistal spines. Leg spination: femora I d1-1-0, p0-0-1; II d1-1-0, p0-0-1; III d1-1-0, p1-0-1, r0-1-1; IV d1-1-0, p0-0-1, r0-0-1; tibiae I, II v0-0-1, III d1-0-0, p1-1-1, r0-1-1, v2-2-2(a); IV p1-1-1, r2-1-1, v2-2-2(a); metatarsi I, II v2-0-0; III p1-2-2, r1-1-2, v2-2-2(a); IV p1-2-2, r2-2-2, v2-3-2(a). Epigynal atrium with a scape widened towards its distal end (Fig. 4). Spermathecae with wide, adjoining median ducts (Fig. 5).

Male unknown.

Haplodrassus rugosus sp.n.

Figs 6–9.

MATERIAL. Holotype ♂ (ZMMU), Kazakhstan, Almaty area, Uigursky district, c. 11 km north-west of

Chundzha, Charyn River Canyon, 650 m a.s.l., riverine *Fraxinus–Populus–Salix* forest, 29–31.05.2001, S.I. Golovatch.

ETYMOLOGY. The specific epithet is derived from the Latin word ‘*rugosus*’ meaning ‘wrinkle’ and refers to the creased nature of the terminal apophysis in this species.

DIAGNOSIS. The new species is somewhat similar to *H. belgeri* Ovtsharenko et Marusik, 1988 and *H. soerenseni* (Strand, 1900) (see figs 45, 50, 53 and 51, 52 in Ovtsharenko & Marusik [1988], respectively), but can be distinguished by the narrow, acerate embolus (not as wide as in either *H. soerenseni* or *H. belgeri*) and the cogged (i.e., bearing teeth) tip of the terminal apophysis (smooth and round in the related species). In the shape of the embolus, this species is similar to the European *H. kulczynskii* Lomander, 1942, but is easily distinguished by the shape and size of the terminal apophysis (much wider in the latter species; see pl. VII, fig. 14 in Miller [1971]).

DISTRIBUTION. The type locality only.

DESCRIPTION. Male. Total length 5.75. Carapace 2.40 long, 2.00 wide, brown. Eye field obscured. Sternum brown, with dark thin margins. Abdomen grey. Legs and palps yellow–brown. Chelicerae dark brown, with three promarginal and two small retromarginal teeth. Palpal femur with one dorsomedian spine and two dorsodistal spines. Femur II 1.35 long. Leg spination: femora I d1-1-0,

p0-0-1; II d1-1-0, p0-0-1; III d1-1-0 p0-0-1, r0-0-1; IV d1-1-0, r0-0-1; tibiae III p2-0-1, r0-1-1, v2-2-2(a); IV p1-0-1, r1-1-1, v2-2-2(a); metatarsi I, II v2-0-0; III p2-0-2, r2-0-2, v2-0-2(a); IV p2-0-2, r2-0-2, v1-2-2(a). Retrolateral tibial apophysis spade-shaped at tip (Fig. 9). Terminal apophysis wrinkled (rugose), bifurcate at the tip (Fig. 6).

Female unknown.

Heser gen.n.

Type species: *Heser malefactor* sp.n.

ETYMOLOGY. The specific epithet is derived from the name of the Mongol hero, 'Heser', who according to legend cleared the Earth of monsters. Masculine in gender.

DIAGNOSIS. This genus belongs to the tribe Zelotini, with the species of *Heser* resembling those of some *Zelotes* Gistel, 1848 (the *laccus* subgroup) in having a transverse embolus extending across the distal edge of the palpal bulb (see figs 219, 227, 231 in Platnick & Shadab [1983]). However, the *Heser* species differ significantly from the type species of *Zelotes* (*Z. subterraneus*) by lacking the following characters: a wide embolar base, a relatively short, distally originating embolus and a relatively small median apophysis in males, and coiled median epigynal ducts and blind paramedian ducts in females. In addition, the congeners of *Zelotes* possess a shiny, dark brown carapace and legs and a darker abdomen. In contrast, those of *Heser* have a light, grey-yellow carapace and a grey abdomen.

The males of *Heser* species can also be distinguished from those of the *laccus* subgroup of *Zelotes* by lacking an intercalary sclerite and a terminal apophysis, as well as by possessing an elongated hook-shaped median apophysis; the females can be separated by the large adventitious glands of the spermathecae.

DISTRIBUTION. Tanzania, Egypt including Sinai, Israel, apparently Syria and Jordan, Kazakhstan.

REMARKS. *H. aradensis* (Levy, 1998) from Israel and *H. infumatus* (O. Pickard-Cambridge, 1872) from central and north Africa and Israel were (re)described by Levy [1998] on the basis of the Israeli material (both sub *Zelotes*). Although I have been unable to re-examine the types, the excellent illustrations of Levy [1998: figs 112–119] allow me to conclude that both species share the diagnostic characters of *Heser* (see above) and should be assigned to it. Therefore, I propose two new combinations, *Heser aradensis* (Levy, 1998) **comb.n.** and *Heser infumatus* (O. Pickard-Cambridge, 1872) **comb.n.**

DESCRIPTION. Anterior eye row straight, posterior row slightly procurved. The anterior median eyes circular, dark; posterior median eyes oval, light; lateral eyes oval, light (Fig. 15). Labium relatively ovoid. Male abdomen without scutum. Chelicerae with three promarginal teeth and one small retromarginal tooth. Embolus originates from the bulb basally, and runs up distally in a furrow on the bulb's mesal side, and around its apical, membranous outgrowth (Fig. 10). The retrolateral tibial apophysis is bent apically (Fig. 11). Females have an elongated epigyne with a procurved anterior margin (Fig. 13) and slightly curved median epigynal ducts (Fig. 14).

SPECIES INCLUDED: *H. aradensis* (Levy, 1998) **comb.n.**, *H. infumatus* (O. Pickard-Cambridge, 1872) **comb.n.** and *H. malefactor* sp.n.

Heser malefactor sp.n.

Figs 10–16.

MATERIAL. Holotype ♂ (ZMMU), Kazakhstan, Almaty area, Uigursky district, 11 km north-west of Chundzha, Charyn River canyon, 650 m a.s.l., riverine *Fraxinus-Populus-Salix* forest, 29–31.05.2001, S.I. Golovatch. Paratype: 1 ♀ (ZMMU), together with the holotype.

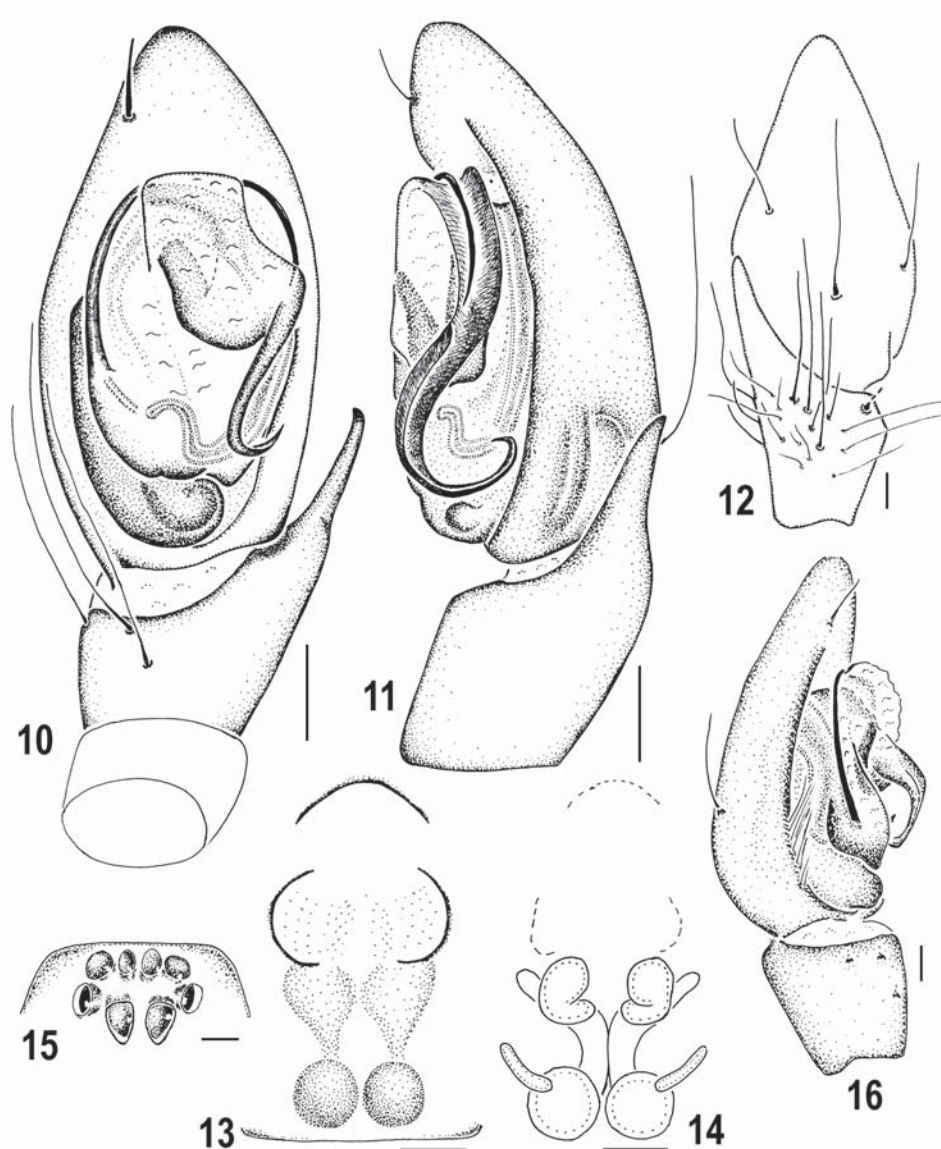
ETYMOLOGY. The species epithet is derived from the Latin '*malefactor*' meaning 'baddy'.

DIAGNOSIS. By the structure of the male copulatory organs, *Heser malefactor* sp.n. is similar to *Heser aradensis*, but can be distinguished by having a longer tibial apophysis and tibia (both are short in *H. aradensis*; see figs 116, 117 in Levy [1998]).

DISTRIBUTION. The type locality only.

DESCRIPTION. Male (holotype). Total length 4.53. Carapace 2.00 long, 1.50 wide, grey-yellow. Sternum yellow, with brown thin margins. Abdomen grey, without scutum. Chelicerae yellow-brown, with three promarginal teeth and a small retromarginal tooth. Palpal femur with one dorsomedian and two dorsodistal spines. Legs grey-yellow. Femur II 1.33 long. Leg spination: femora I d1-1-0, p0-1-1; II d1-1-0, p0-0-1; III d1-1-1, p0-1-1, r0-1-1; IV d1-1-0, p0-0-1, r0-1-1; tibiae II v0-1-0, III d1-0-0, p2-1-1, r0-1-1, v2-2-2; IV p2-2-0, r2-2-0, v2-2-2(a); metatarsi II v2-0-0; III p1-2-2, r1-1-2, v2-0-numerous(a), IV p1-2-2, r1-2-2, v2-1-numerous(a). The transverse embolus extends across the distal edge of the palpal bulb (Fig. 10). The retrolateral tibial apophysis is bent apically (Fig. 11).

Female (paratype). Total length 3.63. Carapace 1.63 long, 1.30 wide. Femur II 0.80 long. Body colour, cheliceral armature and that of palpal femur as in the male. Leg spination: femora I d1-1-0, p0-1-1; II d1-1-0, p0-0-1; III d1-1-1, p0-1-1, r0-1-1; IV d1-1-0, p0-0-1, r0-0-1; tibiae II p2-1-1, v0-1-0, III d1-0-0, p2-1-1,



Figs 10–16. *Hesper malefactor* sp.n.: 10 — male palp, ventral view; 11 — male palp, lateral view; 12 — tibia and cymbium of male palp, dorsal view; 13 — epigyne; 14 — spermathecae; 15 — eye field; 16 — male palp, lateral view. Scale: 0.1 mm.

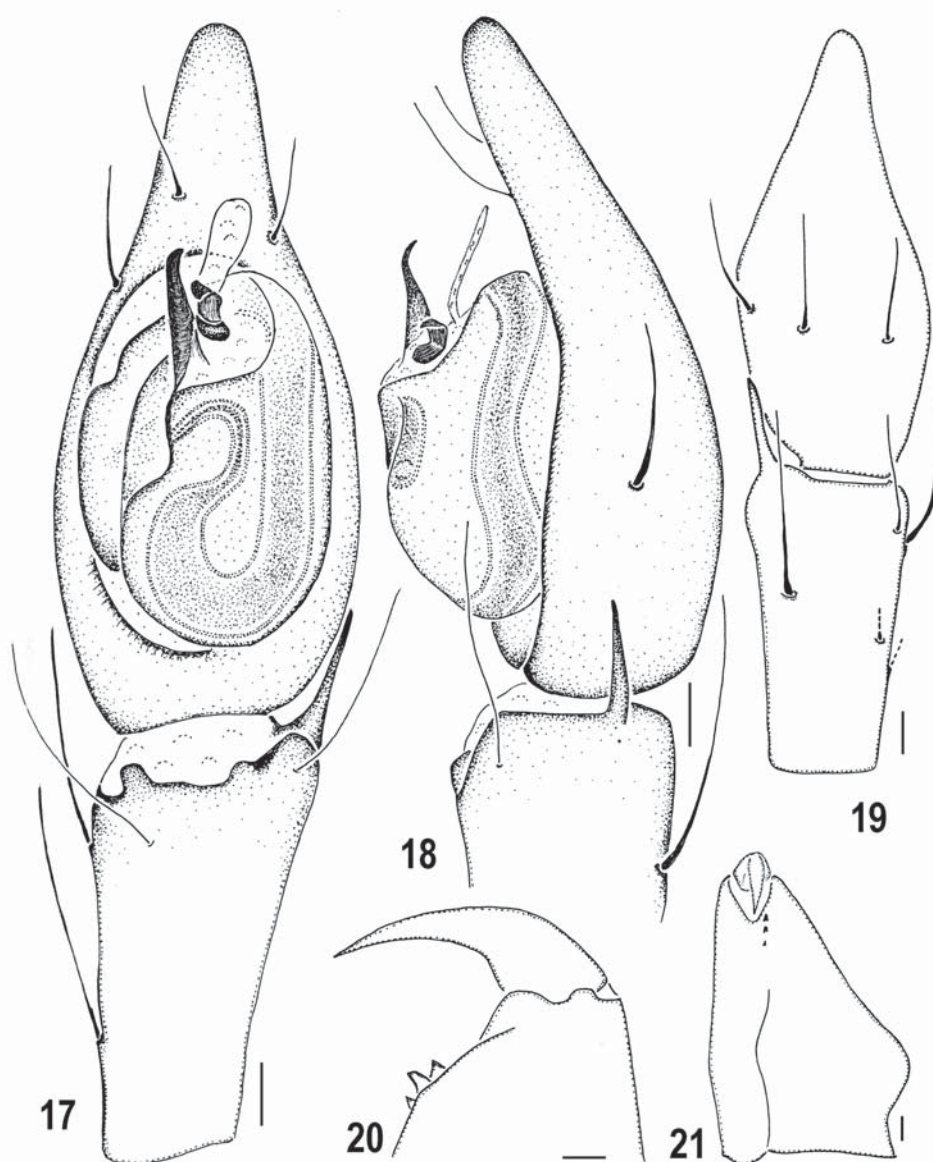
Рис. 10–16. *Hesper malefactor* sp.n.: 10 — палпы самца, вид снизу; 11 — палпы самца, вид сбоку; 12 — голень и цимбиум палпы самца, вид сверху; 13 — эпигина; 14 — сперматека; 15 — глазное поле; 16 — палпы самца, вид сбоку. Масштаб: 0,1 мм.

r0-1-1, v2-2-2; IV p2-2-0, r2-2-0, v2-2-2(a); metatarsi I v2-0-0, II v2-0-0; III p1-2-2, r1-2-2, v2-1-numerous(a), IV p1-2-2, r1-2-2, v2-1-numerous(a). The anterior, lateral and posterior margins of the trigonous epigyne are solid (Fig. 13). The medial epigynal ducts with large adventitious glands (Fig. 14).

Micaria seymuria sp.n.

Fig. 22.

MATERIAL. Holotype ♀ (ZMMU), Kazakhstan, East Kazakhstan area, near Lake Zaisan, Oblay, *Artemisia* steppe, 1936, A.G. Ovsyannikov.



Figs 17–21. *Sidydrassus rogue* sp.n.: 17 — male palp, ventral view; 18 — male palp, lateral view; 19 — tibia and cymbium of male palp, dorsal view; 20 — chelicera of male, anterior view; 21 — ditto, internal view. Scale: 0.1 mm.

Рис. 18–22. *Sidydrassus rogue* sp.n.: 17 — палепа самца, вид снизу; 18 — палепа самца, вид сбоку; 19 — голень и цимбиум палепы самца, вид сверху; 20 — хелицера самца, вид спереди; 21 — тоже, вид изнутри. Масштаб: 0,1 мм.

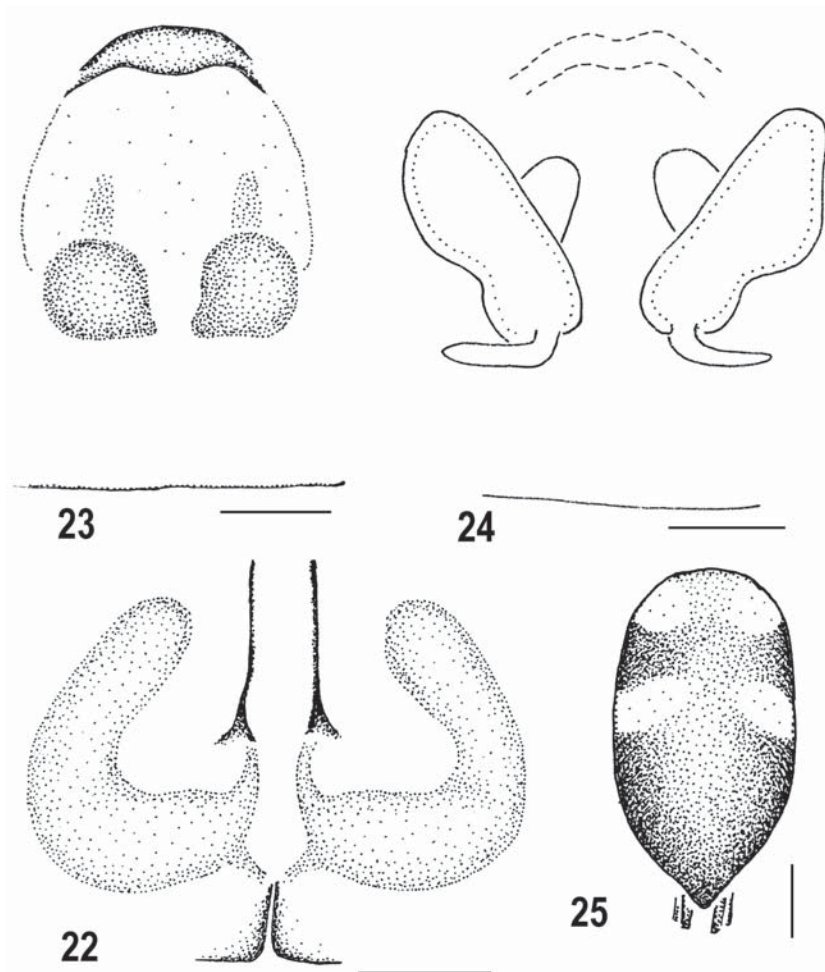
ETYMOLOGY. The specific name is an arbitrary combination of letters.

DIAGNOSIS. The female of the new species is very close to *M. rossica* Thorell, 1875, but differs in having subparallel margins of the epigynal septum (convex in *M. rossica*) and the position of the receptacles, which do not reach the anterior epigynal border (they reach or extend beyond it in *M. rossica*; see figs 57a–e, 70c in Wunderlich [1979]

and fig. 4 in Kharitonov [1951: sub *Micaria shadini*]).

DISTRIBUTION. The type locality only.

DESCRIPTION. Female (holotype). Total length 5.85. Carapace 2.35 long, 1.50 wide, brown. Abdomen shiny, yellow–brown. Palps yellow–brown. Palpal femur with one dorsomedian spine and one dorsoapical spine. Femur brown, tarsus and metatarsus yellow–brown. Femur II 1.70 long. Leg spina-



Figs 22–25. *Micaria seymuria* sp.n. (22) and *Aphantaulax trifasciata* (O. Pickard-Cambridge, 1872) (23–25): 22–23 — epigyne; 24 — spermathecae; 25 — abdomen. Scale: (22–24) 0.1 mm, (25) 1 mm.

Рис. 22–25. *Micaria seymuria* sp.n. (22) и *Aphantaulax trifasciata* (O. Pickard-Cambridge, 1872) (23–25): 22–23 — эпигина; 24 — сперматека; 25 — брюшко. Масштаб: (22–24) 0,1 мм, (25) 1 мм.

tion: femora I, II d1-0-1, p0-0-1; III d1-0-1, p0-0-1, r0-0-1; IV d1-0-1, r0-1-1; tibiae (IV absent) I v2-2-0; II v2-2-2; III d0-0-1, p0-1-1, r0-0-1, v2-2-2(a); metatarsi II v2-0-0; III p2-1-2, r1-1-2, v2-2-2(a). Epigynal septum with well-marked parallel margins; the receptacules V-shaped, with their distal ends directed anteriorly (Fig. 22).

Male unknown.

Sidydrassus rogue sp.n.

Figs 17–21.

MATERIAL. Holotype ♂ (ZMMU), Kazakhstan, East Kazakhstan area, Lake Zaisan, Chekel' mes, 8–9.09.1998, A.A. Zyuzin.

ETYMOLOGY. The species epithet is derived from the Latin 'rogue' meaning a 'rogue' species.

DIAGNOSIS. The new species can easily be distinguished from other *Sidydrassus* species by the following characters: the median apophysis lacking a lateral curved branch; the long dagger-like tibial apophysis [the even longer tibial apophysis in *S. shumakovi* (Spassky, 1934) and the markedly shorter (apparently broken) one in *S. tianschanica* (Hu et Wu, 1989) (cf. Figs 41–43)].

DISTRIBUTION. The type locality only.

REMARKS. The new species can easily be assigned to the genus *Sidydrassus* on the basis of the following characters: the connivent embolus and median apophysis, the large embolar base, and the swollen chelicerae. The genus *Sidydrassus* was originally described based on specimens collected from the southern part of the Russian Plain, middle and

central Asia. *S. tianschanica* was described from north-west China (Xinjiang-Uyгур), a locality close to that where *S. rogue* sp.n. was collected.

DESCRIPTION. Male (holotype). Total length 10.50. Carapace 4.00 long, 2.80 wide, brown. Abdomen grey–yellow. Chelicerae dark brown, with three promarginal teeth, gibbous (Figs 20, 21). Palpal femur with one dorsomedian spine and three dorsoapical spines. Palps and legs yellow–brown. Femur II 3.30 long. Leg spination (IV absent): femora I d1-1-0, p0-0-1; II d1-1-0, p0-1-1; III d1-1-1, p0-1-1, r0-1-1; tibiae I v1-1-1; II p0-0-1, v0-1-1; III d1-0-0, p1-1-1, r1-1-1, v1-2-2(a); metatarsi I, II v2-0-0; III p1-2-2, r2-2-2, v2-2-2(a). Palp with an acerate embolus, a small inconspicuous median apophysis and a membranous conductor (Figs 17, 18). The median apophysis lies close to the embolus. The retrolateral tibial apophysis is dagger-like, with a large knob basally (seen in dorsal view) (Fig. 19).

Female unknown.

Aphantaulax trifasciata (O. Pickard-Cambridge, 1872)

Figs 23–25.

MATERIAL. KAZAKHSTAN: 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, Nikolaevka Vil., sweeping, 19.07.1936, D.E. Charitonov.

DIAGNOSIS. *A. trifasciata* can easily be distinguished from *A. cincta* (L. Koch, 1866) and all other *Aphantaulax* species by the twisted embolus, the shape of the tibial apophysis of the male palp, and the shape of the central cavity of the female epigyne, which has peculiar blackish bodies [*sensu* Levy, 2002]. The present identification should be considered provisional, as it is based on a single female.

DISTRIBUTION. Russia, Ukraine, Azerbaijan, Kazakhstan, Turkmenistan and Kirghizia [Mikhailov, 1997].

DESCRIPTION. Female. Total length 8.00. Carapace 2.65 long, 1.85 wide, brown. Abdomen grey–brown, with a dorsal pattern as in Fig. 25. Legs and palps brown. Palpal femur with one dorsomedian spine and two dorsodistal spines. Femur II 1.55 long. Leg spination: femora I, II d1-1-1, p0-0-1; III d1-1-1 p0-1-1, r0-1-1; IV d1-1-1, p0-1-1, r0-0-1; tibiae I v0-1-1; (II absent); III d1-0-0, p1-1-1, r1-1-1, v1-1-2(a); IV d0-1-0, p1-0-1, r1-0-1, v2-2-2(a); metatarsi I v1-0-0; III p1-1-2, r1-1-1, v2-0-2(a); IV p1-1-2, r1-2-1, v1-2-2(a). The epigyne is positioned far from the epigastric furrow (Fig. 23).

Berlandina apscheronica Dunin, 1984

Figs 26, 27.

MATERIAL. Kazakhstan: 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, c. 4 km south-west of Topolev Cape, *Artemisia* steppe, 14.07.1936, D.E. Charitonov.

DIAGNOSIS. By the structure of the epigyne, *B. apscheronica* resembles *B. caspica* Ponomarev, 1979, but can easily be distinguished by the clearly wider epigynal atrium (narrow in *B. caspica*; see fig. 3 in Ponomarev [1979]).

DISTRIBUTION. Azerbaijan, east Kazakhstan; the latter is a new and the easternmost record for the species.

DESCRIPTION. Female. Total length 6.20. Carapace 2.75 long, 2.05 wide, brown with dark margins. Sternum yellow–brown, with thin, brown margins. Abdomen: dorsum grey–brown, venter grey. Chelicerae brown. Palpal femur with one dorsomedian spine and two dorsodistal spines. Legs and palps yellow–brown. Femur II 1.80 long. Leg spination: femora I, II d1-1-0, p0-0-1; III d1-1-1, p0-1-1, r0-1-1; IV d1-0-1, p0-0-1, r0-0-1; tibiae I v2-1-2, II v1-1-2, III d1-0-0, p1-0-1, r1-1-1, v2-2-2; IV d1-0-0, p1-1-1, r1-1-1, v2-2-2(a); metatarsi I, II v2-0-2; III d1-0-0, p1-1-2, r1-2-2, v2-2-2(a), IV d1-0-0, p1-2-2, r2-2-2, v2-2-2(a). The anterior epigynal margin is bow-shaped, the epigynal atrium is deep (Fig. 26). The spermathecae have involute (= twisted) ducts (Fig. 27).

Berlandina spasskyi Ponomarev, 1979

Figs 28, 29.

Berlandina spasskyi Ponomarev, 1979: 922, f. 7 (♀).
B. xinjiangensis Hu et Wu, 1989: 253, f. 207, 1–4 (♂♀), **syn.n.**

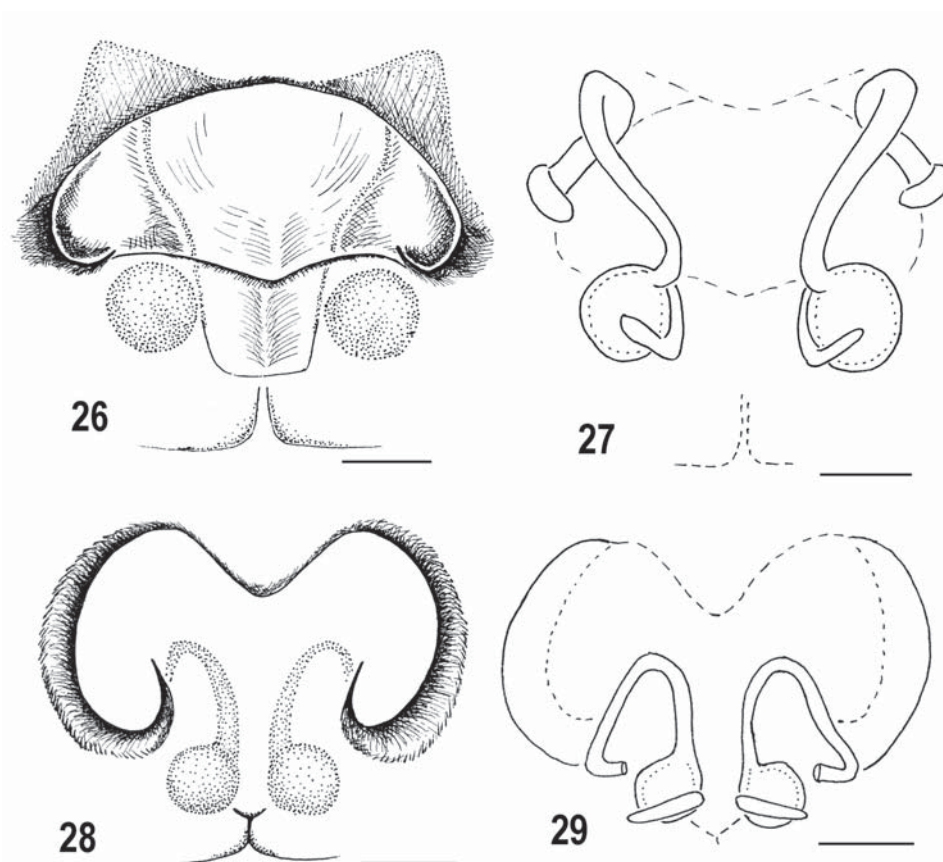
MATERIAL. KAZAKHSTAN: 3 ♀♀ (PSU), East Kazakhstan area, Lake Zaisan, near Topolev Cape, saline land, 1936, A.G. Ovsyannikov.

DIAGNOSIS. The female of *B. spasskyi* is very similar to those of *B. charitonovi* Ponomarev, 1979, but can be distinguished by the deeper epigynal atrium (shallower in *B. charitonovi*) and the proximity of the insemination ducts to one another (further apart in *B. charitonovi*; see fig. 6 in Ponomarev [1979]).

DISTRIBUTION. Russian Plain, mountains and deserts of Middle Asia [Mikhailov, 1997].

REMARKS. Although I have been unable to re-examine the type material of *B. xinjiangensis*, the original illustrations by Hu & Wu [1989: fig. 207, 1] leave no doubts that this species is a junior synonym of *B. spasskyi*. Therefore, based on priority, the former is considered a junior synonym of the latter.

DESCRIPTION. Female. Total length 4.55 (3.80–5.10). Carapace 1.82 (1.55–2.10) long, 1.52 (1.30–1.70) wide, yellow–brown, with grey–yellow margins. Sternum yellow, with thin, brown margins. Abdomen grey–yellow, dorsum with two dark longitudinal fasciae and numerous patches. Chelicerae brown. Palpal femur with one dorsomedian spine and two dorsodistal spines. Legs and palps grey–



Figs 26–28. *Berlandina apscheronica* Dunin, 1984 (26–27) and *B. spasskyi* Ponomarjov, 1979 (28–29): 26, 28 — epigyne; 27, 29 — spermathecae. Scale: 0.1 mm.

Рис. 26–29. *Berlandina apscheronica* Dunin, 1984 (26–27) и *B. spasskyi* Ponomarjov, 1979 (28–29): 26, 28 — эпигина; 27, 29 — сперматека. Масштаб: 0,1 мм.

yellow. Femur II 1.13 (1.00–1.25) long. Leg spination: femora I, II d1-1-0, p0-0-1; III d1-1-1, p0-1-1, r0-1-1; IV d1-1-0, p0-0-1, r0-0-1; tibiae I v2-1-2, II v1-1-2, III d 1-0-0, p1-1-1, r0-1-1, v2-2-2; IV d1-0-0, p1-1-1, r1-1-1, v2-2-2(a); metatarsi I, II v2-0-2; III d0-1-0, p1-1-2, r1-1-2, v2-2-2(a), IV d1-1-1, p1-1-2, r1-1(2)-2, v2-2-2(a). The epigynal atrium has a W-shaped anterior margin and a deep depression (Fig. 28). The spermathecae have curved ducts (Fig. 29).

New faunistic records

Drassodes villosus (Thorell, 1856)

MATERIAL. KAZAKHSTAN: 2 ♀♀ (PSU), East Kazakhstan area, Lake Zaisan, Urenkobka Vil., *Salix* trunk, 24.07.1936, D.E. Charitonov.

DISTRIBUTION. Trans-Palaeartic range [Marusik *et al.*, 2000]: Europe, Kazakhstan, south Siberia, Middle Asia, Khabarovsk territory.

Gnaphosa licenti Schenkel, 1953

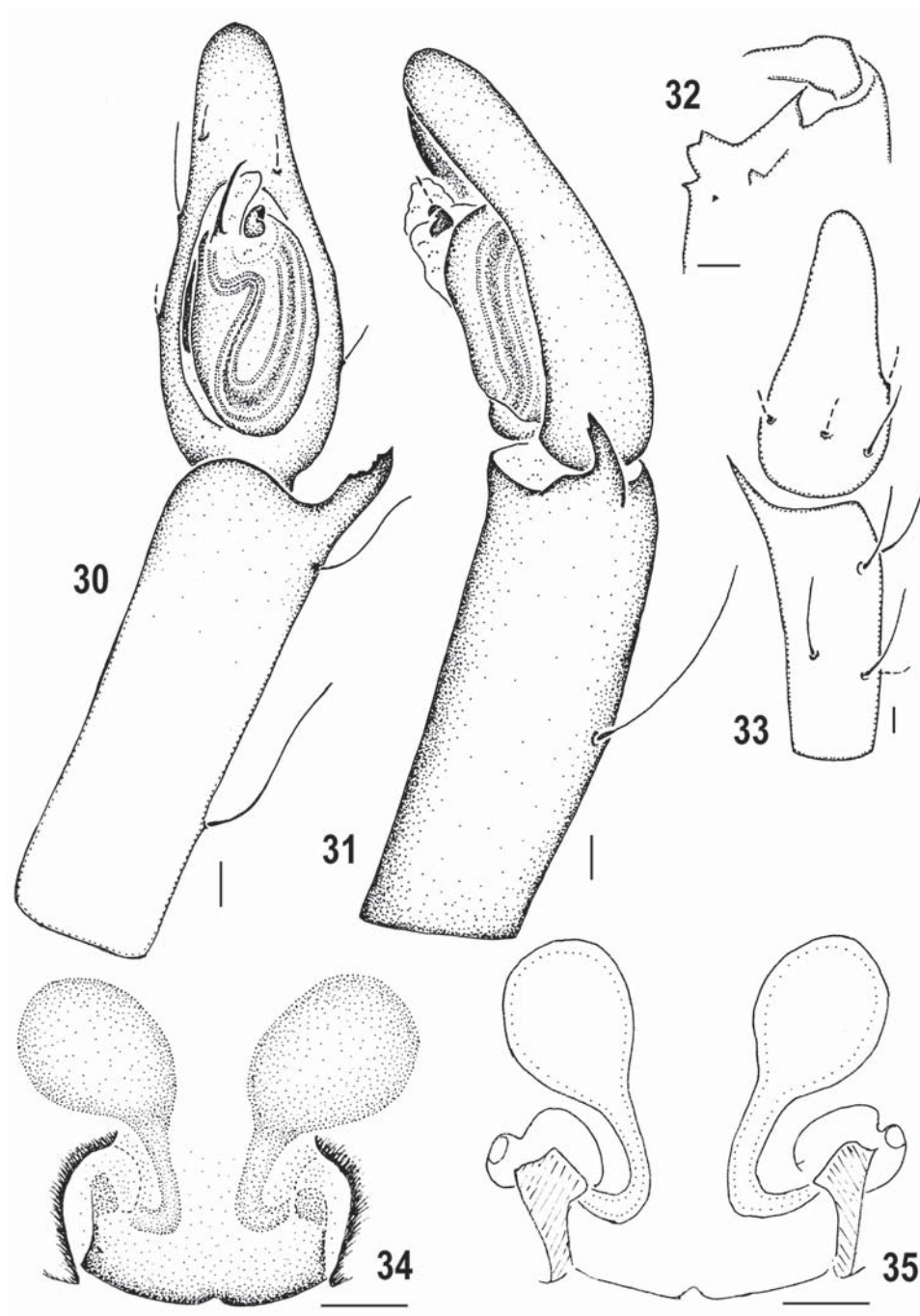
MATERIAL. KAZAKHSTAN: 1 ♂ (PSU), East Kazakhstan area, near Lake Zaisan, Oblay Vil., *Artemisia* steppe, 1936, A.G. Ovsyannikov; 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, Topolev Cape, sand, 1936, A.G. Ovsyannikov.

DISTRIBUTION. East Palaeartic range [Marusik *et al.*, 2000], viz., the south Urals, Kazakhstan, south Siberia, Middle Asia, Mongolia, China, Korea.

Gnaphosa muscorum (L. Koch, 1866)

MATERIAL. KAZAKHSTAN: 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, Kara-Chek Mt., under stones, 1936, A.G. Ovsyannikov.

DISTRIBUTION. Holarctic range [Ovtsharenko *et al.*, 1992]: Europe, Kazakhstan, Siberia, Mongolia, China, Canada, USA.



Figs 30–35. *Drassodes serratidens* Schenkel, 1963: 30 — male palp, ventral view; 31 — male palp, lateral view; 32 — male chelicera; 33 — tibia and cymbium of male palp, dorsal view; 34 — epigyne; 35 — spermathecae. Scale: 0.1 mm.

Рис. 30–35. *Drassodes serratidens* Schenkel, 1963: 30 — пальпа самца, вид снизу; 31 — пальпа самца, вид сбоку; 32 — хелицера самца; 33 — голень и цимбиум пальпы самца, вид сверху; 34 — эпигина; 35 — сперматека. Масштаб: 0,1 мм.

Gnaphosa pilosa Saveljeva, 1972

MATERIAL. KAZAKHSTAN: 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, c. 3 km of Kyzyl... (label illegible), Mts 2200 m a.s.l., under stones, 6.08.1936, D.E. Charitonov.

DISTRIBUTION. Kazakhstan: East Kazakhstan and Semipalatinsk areas [Ovtsharenko *et al.*, 1992].

Gnaphosa saurica Ovtsharenko, Platnick et Song, 1992

MATERIAL. KAZAKHSTAN: 1 ♂ (PSU), East Kazakhstan area, Lake Zaisan, Topolev Cape, coast, 1936, A.G. Ovsyannikov.

DISTRIBUTION. Kazakhstan: East Kazakhstan and Semipalatinsk areas [Ovtsharenko *et al.*, 1992].

Micaria pulicaria (Sundevall, 1831)

MATERIAL. KAZAKHSTAN: 1 ♂ (PSU), East Kazakhstan area, near Ermakovka, GES, 29.05.1982, T. Lukarevskaya.

DISTRIBUTION. Holarctic range [Marusik *et al.*, 2000]: Europe, the Caucasus, Kazakhstan, Siberia, Middle Asia, China, Kamchatka, Sakhalin, widespread in North America.

Micaria tuvensis Danilov, 1993

MATERIAL. KAZAKHSTAN: 1 ♀ (PSU), East Kazakhstan area, Topolev Cape, *Stipa* steppe, 1936, A.G. Ovsyannikov.

DISTRIBUTION. Mongolian steppe–desert range [Marusik *et al.*, 2000]: south Siberia, Middle Gobi, Inner Mongolia. New record for east Kazakhstan.

Nomisia aussereri (L. Koch, 1872)

MATERIAL. KAZAKHSTAN: 3 ♀♀ (PSU), East Kazakhstan area, Lake Zaisan, Chekel'mes, 8–9.09.1998, A.A. Zyuzin.

DISTRIBUTION. Russia, Ukraine, Azerbaijan, Kazakhstan, Turkmenistan, Kirghizstan [Mikhailov, 1997].

Parasyrisca altaica Ovtsharenko, Platnick et Marusik, 1995

Figs 36, 37.

MATERIAL. KAZAKHSTAN: 4 ♀♀ (PSU), East Kazakhstan area, Lake Zaisan, Mt. 1327, under stones, 22.07.1936, D.E. Charitonov.

DISTRIBUTION. Known only from the Kazakhstan part of the Altai [Ovtsharenko *et al.*, 1995].

DESCRIPTION. Female. Total length 11.00 (9.90–13.2). Carapace 4.45 (3.70–5.10) long, 3.58 (3.00–4.10) wide, red–brown. Sternum red–brown, with thin dark margins. Abdomen grey–brown. Legs and palps brown. Chelicerae red–brown, with three

promarginal and two retromarginal teeth. Palpal femur with one dorsomedian spine and two dorso-distal spines. Femur II 3.23 (2.50–3.60) long. Leg spination: femora I, II d1-1-0, p0-0-1; III d1-1-0 p0-1-1, r0-1-1; IV d1-1-0, p0-0-1, r0-0-1; tibiae I v2-2-0; II v1-2-0; III p2-0-1, r1-0-1, v2-1-2(a); IV p2-0-1, r1-0-1, v2-2-2(a); metatarsi I, II v2-0-0; III, IV p2-0-2, r2-0-2, v2-0-2(a). The epigynal atrium has a hood-shaped, wide posterior ridge (Fig. 36); the copulatory opening is directed posteriorly; the insemination ducts are directed anteriorly, and the spermathecal ducts are curved (Fig. 37) [Ovtsharenko *et al.*, 1995].

Male unknown.

Talanites fagei Spassky, 1938

MATERIAL. Kazakhstan: 4 ♂♂, 8 ♀♀ (PSU), Almaty Area, Uigursky Distr., c. 11 km north-west of Chundzha, Charyn River canyon, c. 650 m a.s.l., riverine *Fraxinus–Populus–Salix* forest, 29–31.05.2001, S.I. Golovatch.

DISTRIBUTION. Russia, the Caucasus, Kazakhstan, Kirghizstan, Turkmenistan [Platnick & Ovtsharenko, 1991].

Zelotes latreillei (Simon, 1878)

MATERIAL. Kazakhstan: 1 ♀ (PSU), Almaty area, Dzhungar Alatau Mts, c. 7 km E of Lepsinsk, Chornaya River canyon, 1200–1400 m a.s.l., *Betula–Malus–Populus* forest, 13–15.06.2001, S.I. Golovatch.

DISTRIBUTION. West Palaearctic range: Europe, the Caucasus, Kazakhstan, Middle Siberia. New record for east Kazakhstan.

Zelotes potanini Schenkel, 1963

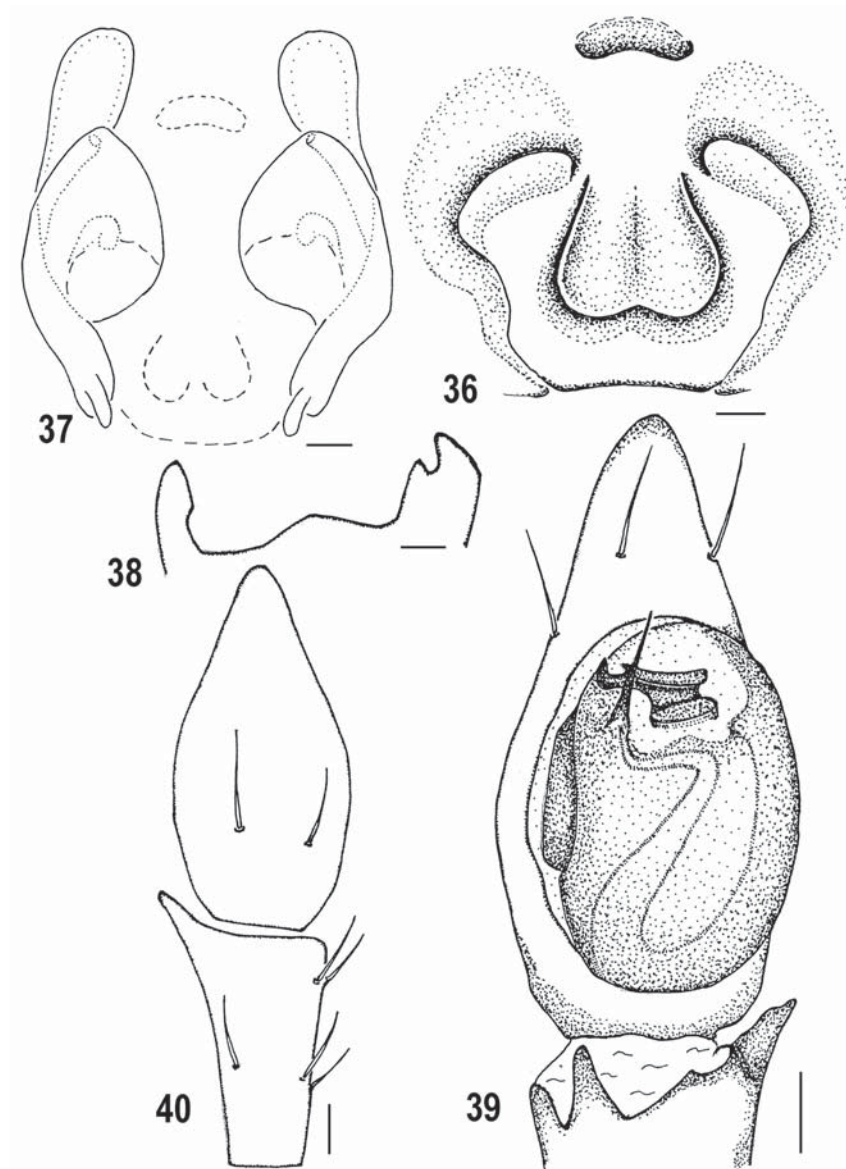
MATERIAL. Kazakhstan: 1 ♀ (PSU), East Kazakhstan area, Lake Zaisan, Kara-Chek Mt., under stones, 1936, A.G. Ovsyannikov; 1 ♀ (PSU), East Kazakhstan area, Chilikinskaya Valley, meadow, 15.08.1936, D.E. Charitonov.

DISTRIBUTION. Siberio–Manchurian range [Marusik *et al.*, 2000]: the south Ural, east Kazakhstan, south Siberia, Yakutia, China, Japan.

Zelotes subterraneus (C.L. Koch, 1833)

MATERIAL. Kazakhstan: 1 ♀ (PSU), Almaty Area, Dzhungar Alatau Mts, c. 7 km east of Lepsinsk, Chornaya River Canyon, 1200–1400 m a.s.l., *Betula–Malus–Populus* forest, 13–15.06.2001, S.I. Golovatch; 1 ♀ (PSU), Makanchi District, Tarbagatai Mts., c. 6 km north-east of Kirovka (= Karatuma), Sholakterek river valley, highly disturbed *Populus* forest with *Salix rosa*, *Lanicea*, *Crataegus* etc., 23–24.06.2001, S.I. Golovatch.

DISTRIBUTION. West Palaearctic range: north Africa, Europe, the Caucasus, Kazakhstan, West Siberia, Middle Asia.

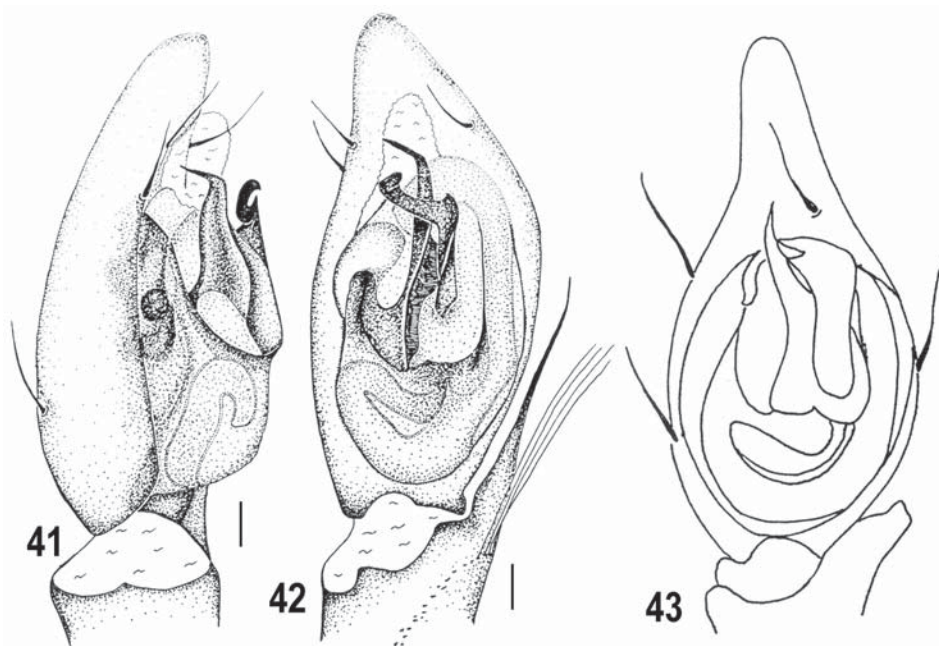


Figs 36–40. *Parasirisca altaica* Ovtsharenko, Platnick et Marusik, 1995 (36–37) and *Drassodes pubescens* (Thorell, 1856) (38–40): 36 — epigyne; 37 — spermathecae; 38 — apical part of male palp tibia, lateral view; 39 — male palp, ventral view; 40 — tibia and cymbium of male palp, dorsal view. Scale: 0.1 mm.

Рис. 36–40. *Parasirisca altaica* Ovtsharenko, Platnick et Marusik, 1995 (36–37) и *Drassodes pubescens* (Thorell, 1856) (38–40): 36 — эпигина; 37 — сперматека; 38 — вершина голени пальца самца, вид сбоку; 39 — палепа самца, вид снизу; 40 — голень и цимбиум пальца самца, вид сверху. Масштаб: 0,1 мм.

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Figs 41–43. *Sidydrassus shumakovi* (Spassky, 1934) (41–42) and *Sidydrassus tianschanica* (Hu et Wu, 1989) (43, after Hu & Wu [1989]): 41 — male palp, lateral view; 42–43 — ditto, ventral view. Scale: 0.1 mm.

Рис. 41–43. *Sidydrassus shumakovi* (Спасский, 1934) (41–42) и *Sidydrassus tianschanica* (Ху и Ву, 1989) (43, по Ху & Ву [1989]): 41 — палпа самца, вид сбоку; 42–43 — то же, вид снизу. Масштаб: 0,1 мм.

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