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Further notes on the wolf spider genus *Asiacosa* Logunov, 2023 (Aranei: Lycosidae)

Дополнительные сведения о роде пауков-волков *Asiacosa* Logunov, 2023 (Aranei: Lycosidae)

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КЛЮЧЕВЫЕ СЛОВА: Araneae, Средняя Азия, Таджикистан, Туркменистан, Узбекистан, описания, распространение.

ABSTRACT. The paper presents new taxonomic-faunistic data on four species of *Asiacosa* Logunov, 2023 (Lycosidae, Aranei) from Middle Asia. The name *Lycosa asiatica* Sytshevskaja, 1980, syn.n. is synonymized with *Lycosa kulagini* Spassky, 1941. Two *Asiacosa* species are described as new to science: viz., *A. krivokhatskyi* sp.n. (♂; Turkmenistan) and *A. ovchinnikovi* sp.n. (♂♀; Tajikistan). A distributional map and identification key to all the Middle Asian species of *Asiacosa* are provided as well.

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РЕЗЮМЕ. В работе представлены новые таксономико-фаунистические данные по четырем видам *Asiacosa* Logunov, 2023 (Lycosidae, Aranei) из Средней Азии. Название *Lycosa asiatica* Sytshevskaja, 1980, syn.n. синонимизировано с *Lycosa kulagini* Spassky, 1941. Два вида *Asiacosa* species описаны как новые для науки: а именно, *A. krivokhatskyi* sp.n. (♂; Туркменистан) и *A. ovchinnikovi* sp.n. (♂♀; Таджикистан). Приведены также карта распространения и определительный ключ для всех среднеазиатских видов *Asiacosa*.

Introduction

The genus *Asiacosa* Logunov, 2023 was established for four fossorial wolf spider species from Middle Asia and Egypt, all of which were known from the original type series only [Denis, 1947: sub *Arctosa ambigua*; Logunov, 2023; WSC, 2025]. In September 2024, the author of this paper visited the Institute for Systematics and Ecology of Animals in Novosibirsk (Russia), where most of the wolf spider collection assembled by Alexei A. Zyuzin (1951–2021; see Logunov [2021]) is housed. All the samples containing *Asiacosa* specimens were sorted out and identified, with the results of the work done being presented in this paper.

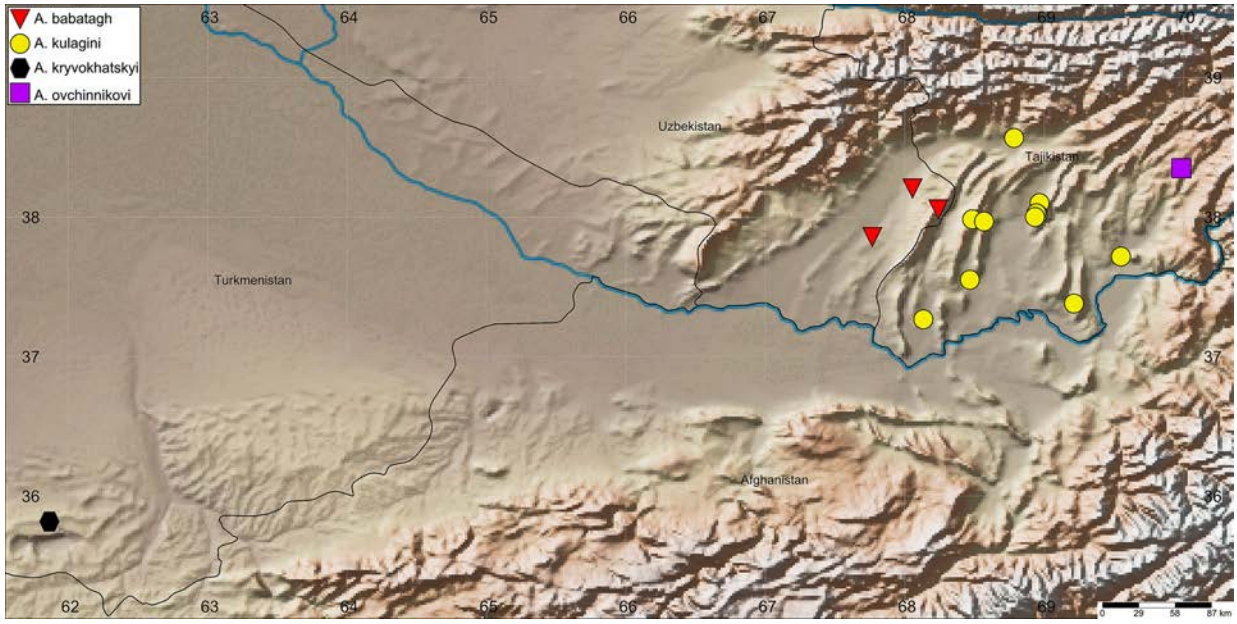
The aims of this paper are (1) to diagnose and describe two new *Asiacosa* species from Middle Asia; (2) to justify the new synonymy revealed in this study; (3) to clarify the definition and composition of *Asiacosa* based on newly studied samples; and (4) to provide an identification key to all the known *Asiacosa* species.

Material and methods

A total of 41 specimens have been studied. These specimens have been borrowed from or shared between the following museums: ISEA — Institute for Systematics and Ecology of Animals, Novosibirsk, Russia (curator: Galina N. Azarkina); ZISP — Zoological Institute of the Russian Academy of Sciences, Saint Petersburg, Russia (curator: Dmitry V. Logunov); ZMMU — Zoological Museum of the Moscow State University, Moscow, Russia (curator: Kirill G. Mikhailov).

The terminology and format of description follow Logunov [2010, 2023]. Abbreviations used in the text and figures: AER — anterior eye row; AME — anterior median eye, ALE — anterior lateral eye, a.s.l. — above sea level, D — described, Distr. — District, E — embolus, EH — epigynal hoods, FC — functional conductor, Fm — femur, MA — median apophysis, Mt — metatarsus, Pl — palea, PME — posterior median eye, PLE — posterior lateral eye, Pp — *pars pendula*, PR — primary receptacle, Pt — patella, SER — second eye row, SR — secondary receptacle, Tb — tibia, Tr — tarsus, Vil. — village. The sequence of leg segments in measurement data is as follows: Fm + Pt + Tb + Mt + Tr (total). All measurements are in mm.

Digital photographs were made at the Manchester Museum (UK), using an Olympus SZX16 stereo microscope with a DP27 Digital Colour Camera, and Helicon Focus 7.7.2 as the processing software. Helicon Focus 6.8.0 was used as processing software. Distributional map was produced by using the online mapping software SimpleMappr [Shorthouse, 2010].



Map. Collecting localities of *Asiacosa* species in Middle Asia.
Карта. Точки находок видов *Asiacosa* в Средней Азии.

Results

Asiacosa Logunov, 2023

Type species: *Lycosa asiatica* Sytshevskaja, 1980; by original designation [Logunov, 2023].

DESCRIPTION. Based on the newly studied material, the definition and description of the genus *Asiacosa* by Logunov [2023] can be supplemented with the following data regarding the copulatory organs of both sexes. *Female copulatory organs*: epigyne without septal pedicel, as a transeverse chitinous bar, which sometimes has the central part lowered or reduces making the chitinous bar look like a pair of transverse-triangular elevations with a lowered space in between (Figs 11, 12); some species (e.g., *A. ovchinnkovi*) have a pair of chitinous structures resembling shallow and poorly-developed (or reduced) epigynal hoods (Figs 26, 27); vulva with short straight or slightly bent ducts connecting primary and secondary receptacles; seconday receptacles round/ovoid (Figs 13, 27); fertilization ducts prominent, directed latero-anteriad. *Male copulatory organs*: bulbus slightly elongated (1.3–1.4 times longer than wide; Figs 1, 5, 9, 23); subtegulum elongated and large, situated in proximo-mesal position (7–8 o'clock); tutaculum at 1–2 o'clock; tegulum with a prominent wide whitish membrane covering the basal part of median apophysis (Figs 5, 28); median apophysis triangular, either with a tapering stilletto-like extension directed retro-laterad (pointed or visibly bifurcated; Figs 1, 10), or a hook-shaped extension directed proximad (Figs 23, 28); synembolus absent; embolus awl-shaped, with wide and well-developed *pars pendula* (Figs 3, 25); membranous conductor wide and low (Figs 2, 24).

COMPOSITION. At present, five species are included:

ambigua Denis, 1947 (♀) (*Arctosa*): Egypt (Siwa Oasis) [Denis, 1947].

babatagh Logunov, 2023 (♀) (*Asiacosa*): SE Uzbekistan (Map) [Logunov, 2023].

krivokhatskyi sp.n. (♂) (*Asiacosa*): SE Turkmenistan (Figs 1–8; Map); see below.

kulagini Spassky, 1941 (♂♀) (*Lycosa*): Tajikistan (Figs 9–15; Map); see below.

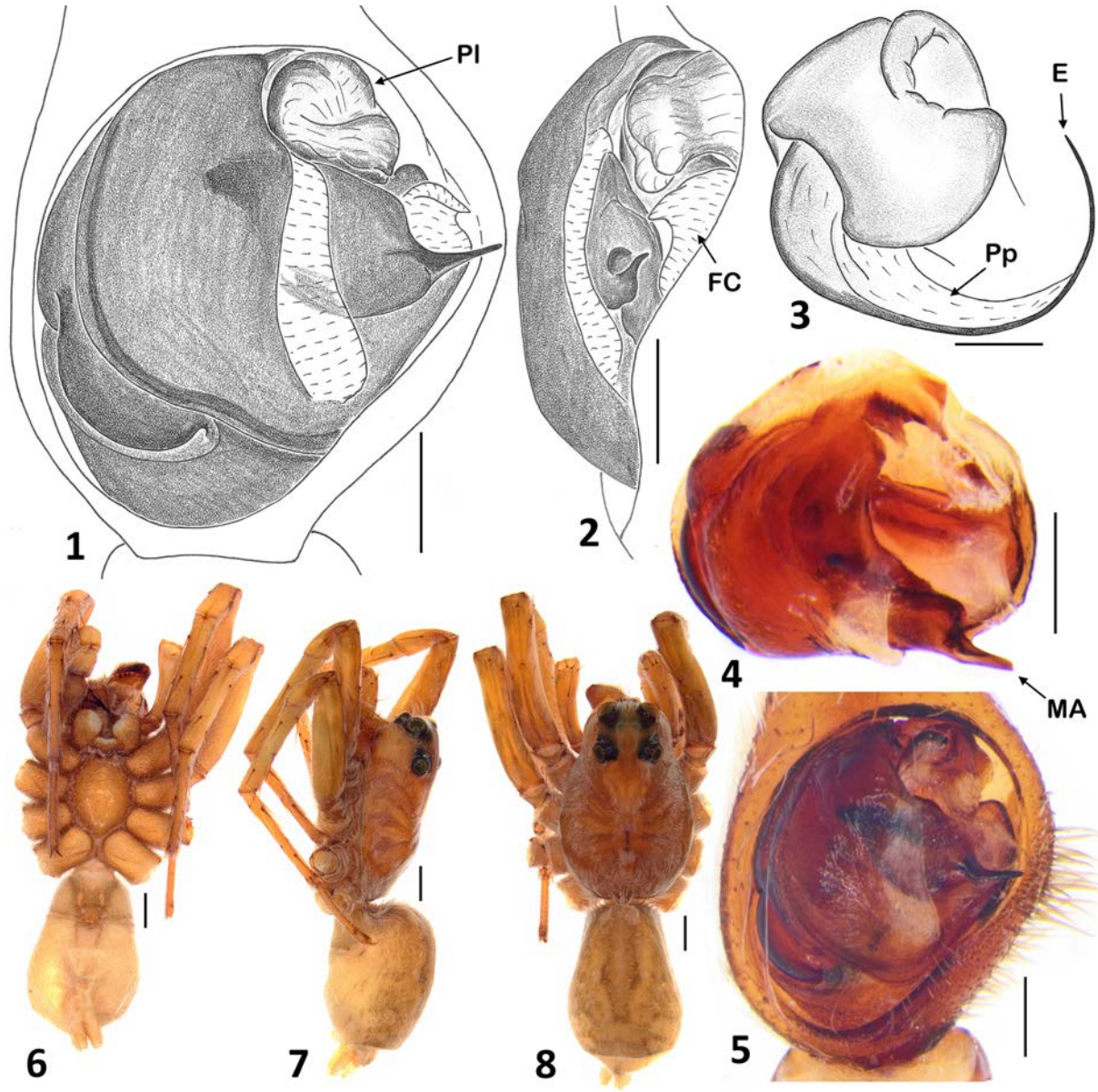
ovchinnikovi sp.n. (♂♀) (*Asiacosa*): Tajikistan (Figs 23–34; Map); see below.

DISTRIBUTION. From the Near East to Middle Asia [Logunov, 2023; present data]; the occurrence of *Asiacosa* species in Iran and Afghanistan is highly likely.

Key to species

The female of *A. krivokhatskyi* sp.n. is yet unknown. The species *A. ambigua* remains known from the original description based on four females [Denis, 1947: sub *Arctosa a.*]. Unfortunately, the spermathecae of *A. ambigua* was not illustrated. Based on the original figure by Denis [1947: pl. 1, fig. 8], the female of this species is very similar to that of *A. babatagh* in having a rather thick transeverse chitinous bar. As beyond this statement the species cannot be clear-cut diagnosed at present, it has not been included in the identification key.

1. Males 2
–. Females 4
2. Median apophysis hook-shaped, its tip directed proximad (Figs 23, 28) ..... *A. ovchinnikovi* sp.n.
–. Median apophysis with a stiletto-like tip directed retro-laterad (Figs 5, 9) 3
3. Height/width ratio of median apophysis = 1.0 (Figs 1, 5) ..... *A. krivokhatskyi* sp.n.
–. Height/width ratio of median apophysis = 0.5 (Fig. 9) ..... *A. kulagini*
4. A pair of small epigynal hoods present (Figs 26, 27) ..... *A. ovchinnikovi* sp.n.
–. Epigynal hoods absent (Figs 11, 12) 5
5. Width/height rate of epigynal bar = 3.8–4.0, vulva as in Figs 11, 12 ..... *A. kulagini*
–. Width/height rate of epigynal bar = 2.9–3.2, vulva as shown in Logunov [2023: fig. 64] ..... *A. babatagh*



Figs 1–8. Male copulatory organs and body of *Asiacosa krivokhatskyi* sp.n., holotype ♂ (1–3, 6–8) and paratype ♂ (4, 5): 1, 5 — bulbus, ventral view; 2 — same, retrolateral view; 3 — embolar division, apical view; 4 — bulbus, apical view; 6 — body, ventral view; 7 — same, lateral view; 8 — same, dorsal view. Scale bars: 0.1 mm (3), 0.25 mm (1, 2, 4, 5), 1 mm (6–8).

Рис. 1–8. Копулятивные органы и тело самца *Asiacosa krivokhatskyi* sp.n., голотип ♂ (1–3, 6–8) и паратип ♂ (4, 5): 1, 5 — бульбус, снизу; 2 — тоже, сбоку-сзади; 3 — эмболярный отдел, апикально; 4 — бульбус, апикально; 6 — тело, снизу; 7 — тоже, сбоку; 8 — тоже, сверху. Масштаб: 0,1 мм (3), 0,25 мм (1, 2, 4, 5), 1 мм (6–8).

Asiacosa babatagh Logunov, 2023
Map.

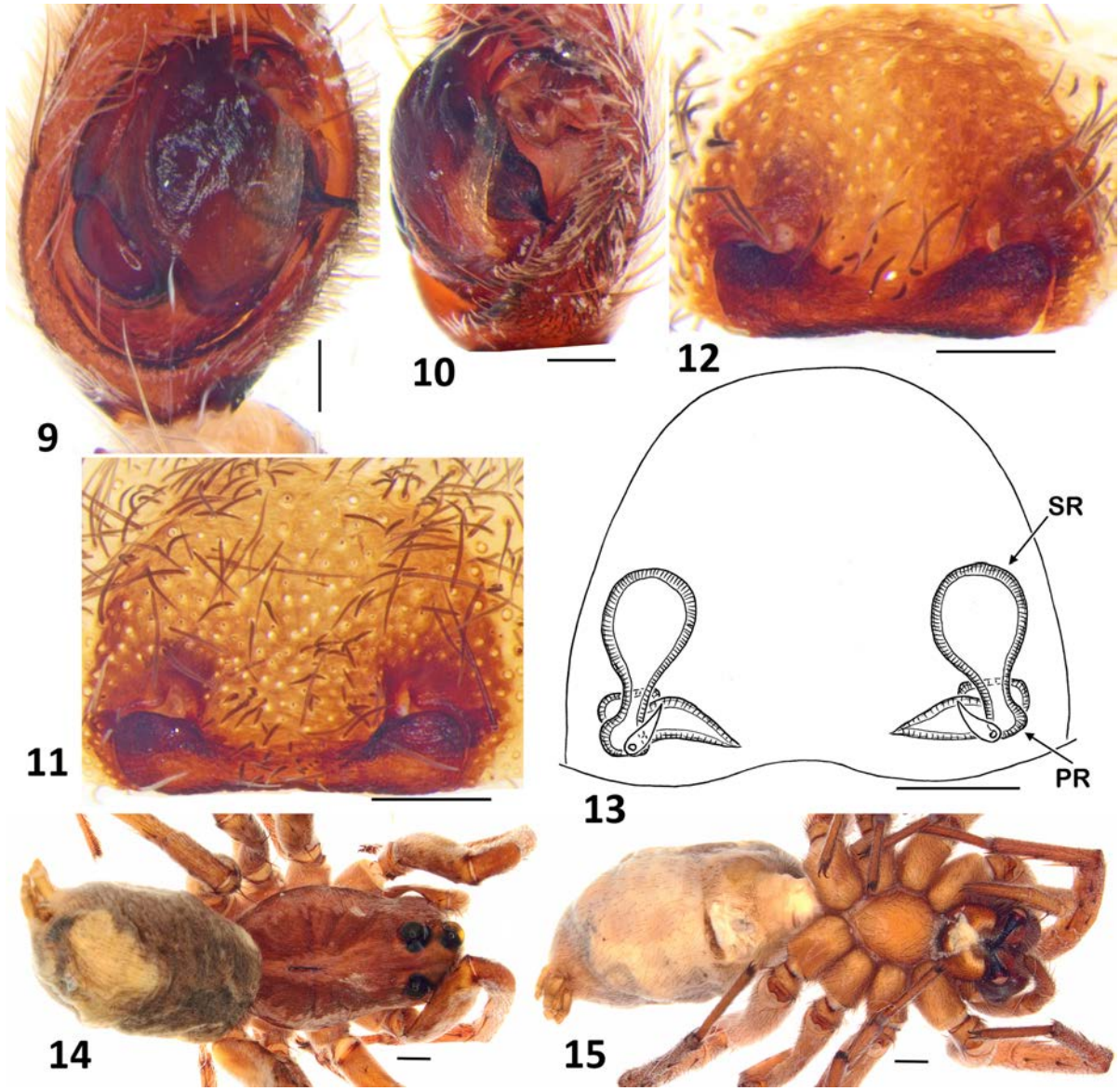
COMMENTS. This species was recently described from females [Logunov, 2023] and remains known from three close localities in south-east Uzbekistan (Map). The male of this species is yet undescribed.

Asiacosa krivokhatskyi **sp.n.**
Figs 1–8, Map.

TYPES. Holotype ♂ (ZISP, ARA_ARA_0001032; Figs 1–3, 6–8), Turkmenistan, Mary Velayat, *c.* 73 km NW of Serhetabat (=Kushka), Badkhyz (=Badhyz) Reserve (*c.* 35°49′N, 61°52′E), canyon Kyzyl-Dzhar (Fig. 17), 18–25.02.1978, V.A. Krivokhatsky. — Paratype: 1 ♂ (ZISP, ARA_ARA_0001034; Figs 4, 5), same locality as for the holotype, 27.01.1978, V.A. Krivokhatsky.

ETYMOLOGY. The new species is dedicated to the late colleague of mine, Dr Victor A. Krivokhatsky (1954–2021; see Ovchinnikova *et al.* [2021], Volkovitsh *et al.* [2021]), the notable entomologist and specialist on Neuroptera from ZISP, who collected the type series of this new species.

DIAGNOSIS. Of the *Asiacosa* species for which both sexes are known, the male of *A. krivokhatskyi* sp.n. is most similar to that of *A. kulagini*, but can be easily distinguished by the comparatively longer and narrower stiletto-like extension of the median apophysis (cf. Figs 1, 5 and 9: viz., the height/width ratio



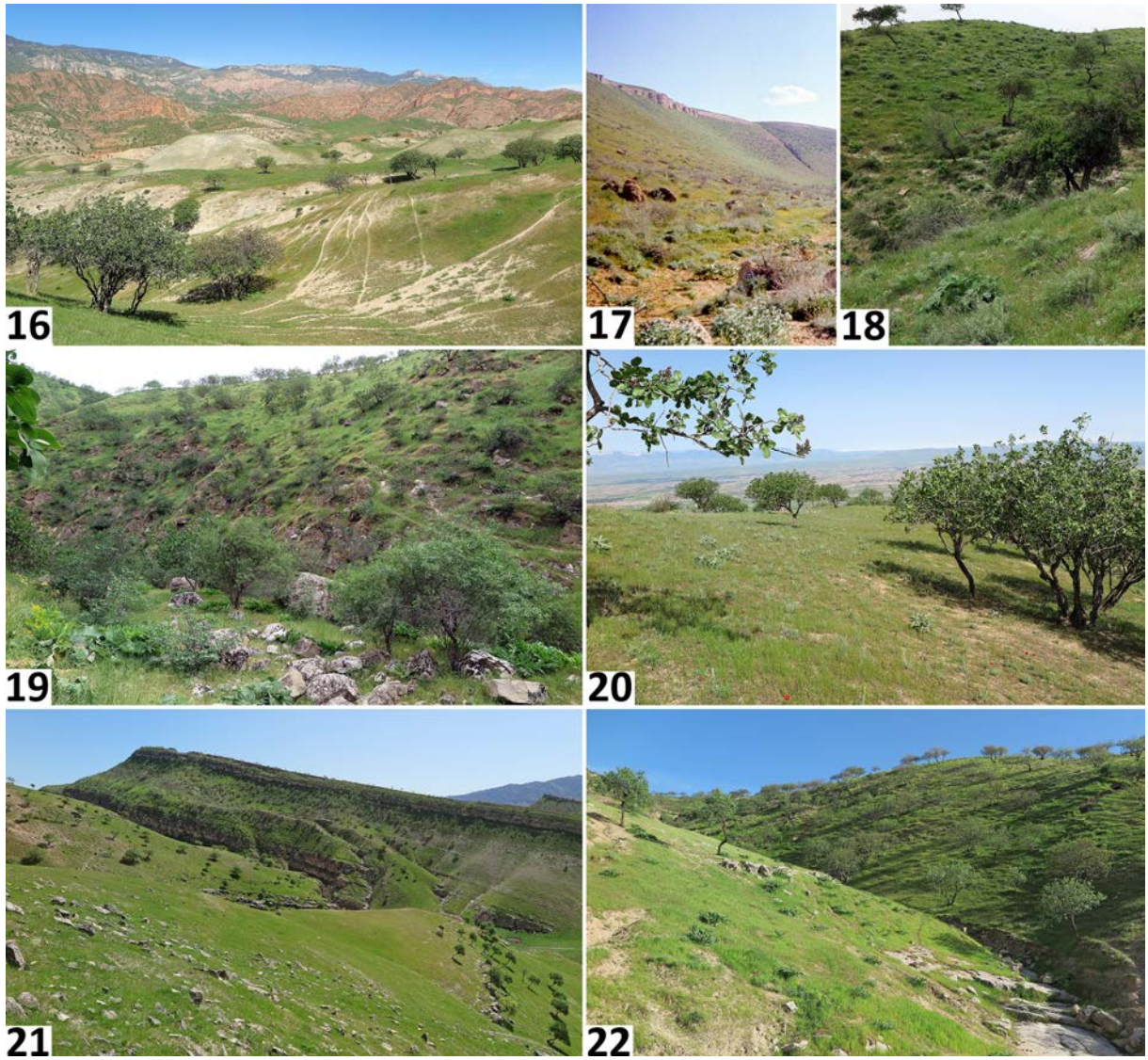
Figs 9–15. Copulatory organs and body of *Asiacosa kulagini* Spassky, 1941 from Tajikistan, Mehnatobod Vil. (ISEA, 001.4269; 9–11) and Shahrtuz (ISEA; 12–15): 9 — male bulbus, ventral view; 10 — same, retrolateral view; 11, 12 — epigyne, ventral view; 13 — vulva, dorsal view; 14 — female body, dorsal view; 15 — same, ventral view. Scale bars: 0.25 mm (9–13), 1 mm (14, 15).

Рис. 9–15. Копулятивные органы и тело *Asiacosa kulagini* Spassky, 1941 из Таджикистана, Мехнатобод (ISEA, 001.4269; 9–11) и Шахртуз (ISEA; 12–15): 9 — бульбус самца, снизу; 10 — тоже, сбоку-сзади; 11, 12 — эпигина, снизу; 13 — вульва, сверху; 14 — тело самки, сверху; 15 — тоже, снизу. Масштаб: 0,25 мм (9–13), 1 мм (14, 15).

of median apophysis in *A. krivokhatskyi* sp.n. is equal to one, i.e., both dimensions are equal), compared to 0.5 in *A. kulagini* (i.e., height twice as large). The female of *A. krivokhatskyi* sp.n. is yet unknown.

DISTRIBUTION. Only the type locality (Map; Fig. 17).

DESCRIPTION. MALE (holotype). Carapace 5.50 long, 3.75 wide. Eye sizes and interdistances: AME 0.30, ALE 0.28, PME 0.75, PLE 0.55, AME-AME 0.15, AME-ALE 0.08, PME-PME 0.60, PLE-PLE 1.20. Width of anterior eye row 1.25, second row 1.75, third row 2.00. Clypeus height 0.08, chelicera length 1.00. Abdomen 4.80 long, 3.35 wide. Length of leg segments: I 4.40 + 1.00 + 3.45 + 3.65 + 2.40 (14.90); II 4.10 + 1.80 + 3.25 + 3.60 + 2.30 (15.05); legs III and IV are missing; there are two detached legs with the holotype, but it is impossible to speculate which one might be leg III or IV (or both). *Spination of leg I*: Fm d 1-2-3ap; Pt pr 0-1-0; Tb d 0-1, pr and rt 1-1, v 2-0-2ap; Mt pr and rt 1-1-2ap, v 2-2-1ap. *Colouration* (Figs 6–8). Carapace sand-coloured, with black around eyes and brownish radial lines, covered with white recumbent scales. Sternum light yellow, tinged with brown at margins. Labium and endites light yellow, with white apexes. Chelicerae yellow. Abdomen: dorsum yellow, tinged with brownish and pale brown cadiac spot, sides and venter light yellow. Book-lung covers yellow, tinged with brown. Spinnerets light yellow. All legs yellow. Palps sand-coloured. Palpal structure as in Figs 1–5: bulbus elongated (1.4 times longer than wide); subtegulum elongated and large, situated in proximal-mesal position (at seven o'clock); tutaculum is situated at one o'clock; tegulum with a wide whitish membrane covering the basal part of median apophysis; median apohysis triangular, wide at base and with a



Figs 16–22. Habitats of *Asiacosa kulagini* Spassky, 1941 (16, 18–22) and *A. krivokhatskyi* sp.n. (17): 16 — Tajikistan, Gazimailik Mts, foothills (foreground) and the main ridge (background), as seen from Ganjina at 800 m (ISEA, 001.4226), April 2015; 17 — Turkmenistan, the type locality, Badkhyz Reserve, Kyzyl-Dzhar canyon, April 1993; 18 — Tajikistan, Panj Karatau Mts, the summit part close to Mt Astana, 1550–1650 m, May 2015; 19 — Tajikistan, Panj Karatau Mts, midland slopes, 1000–1100 m (ISEA, 001.4255), May 2015; 20 — Tajikistan, Vahsh Karatau Mts, Hojamaston Mt., *c.* 800 m (ISEA, 001.4252), April 2015; 21 — Tajikistan, Aruktau Mts SE of Ganjina, April 2015; 22 — same area, NE of Ganjina, April 2015. Credits: all photographs were taken by S.L. Zonstein (Tel-Aviv, Israel).

Рис. 16–22. Местообитания *Asiacosa kulagini* Spassky, 1941 (16, 18–22) и *A. krivokhatskyi* sp.n. (17): 16 — Таджикистан, горы Газимайлик, предгорья (на переднем плане) и главный хребет (на заднем плане), как видно из с. Ганджина на высоте 800 м (ISEA, 001.4226), апрель 2015; 17 — Туркменистан, зап. Бадхыз, Кызыл-Джар, апрель 1993; 18 — Таджикистан, горы Пяндж-Каратау, вершинная часть рядом с горой Астана, 1550–1650 м, май 2015; 19 — Таджикистан, горы Пяндж-Каратау, среднегорье, 1000–1100 м (ISEA, 001.4255), май 2015; 20 — Таджикистан, горы Вахш-Каратау, гора Ходжамастон, ок. 800 м (ISEA, 001.4252), апрель 2015; 21 — Таджикистан, горы Аруктау к югу от с. Ганджина, апрель 2015; 22 — тот же регион, к северо-востоку от с. Ганджина, апрель 2015. Благодарности: все фоторафии выполнены С.Л. Зонштейном (Тель-Авив, Израиль).

stiletto-like extension directed retro-laterad; synembolus absent; embolus awl-shaped, with wide, well-developed *pars pendula*; membranous conductor wide and low (pointed in lateral view).

FEMALE unknown.

Asiacosa kulagini (Spassky, 1941)
Figs 9–15, Map.

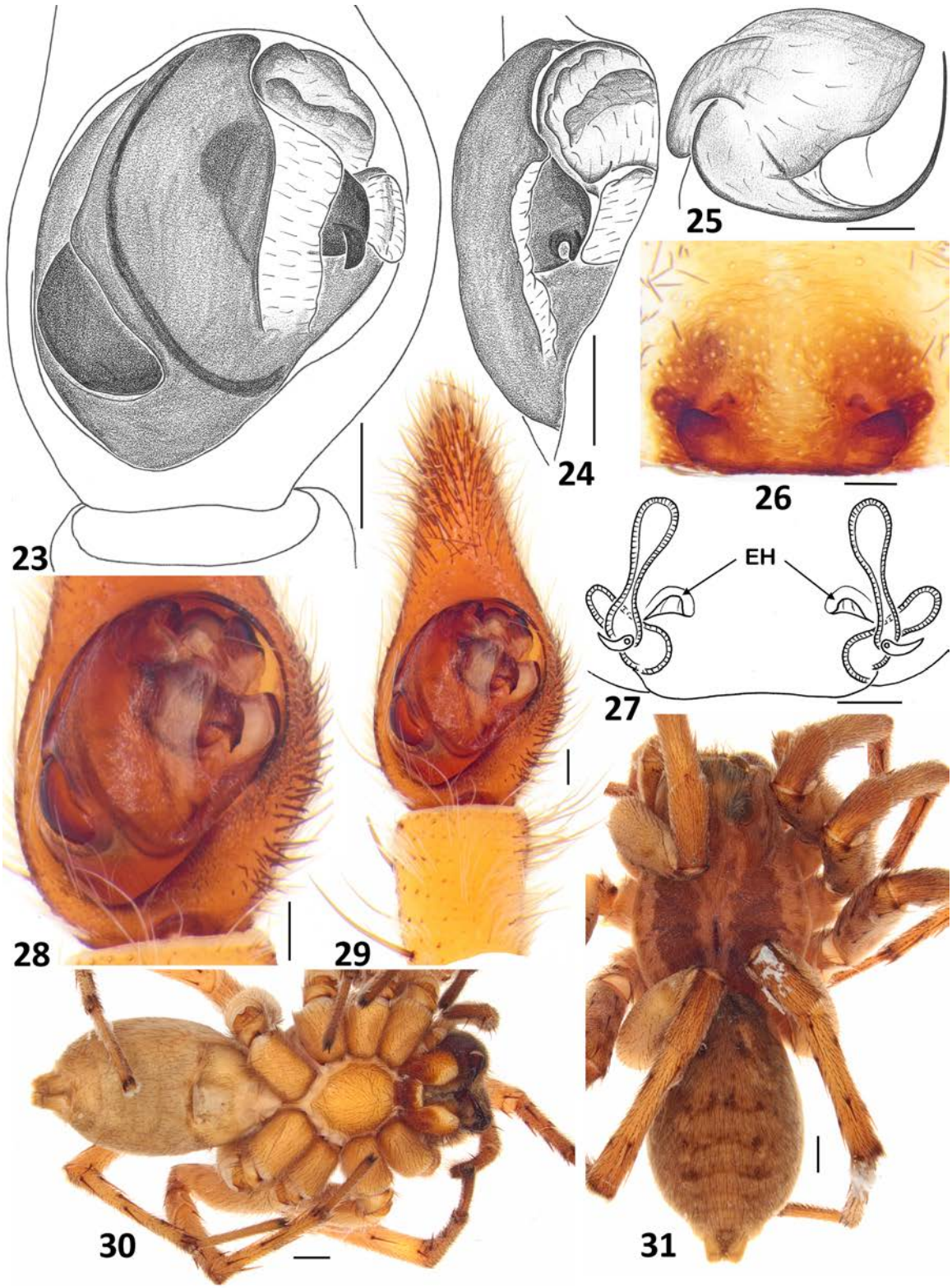
Lycosa kulagini Spassky, 1941: 17, pl. 1, figs 5–6 (D♂); holotype ♂ in ZISP, examined [Logunov, 2023].

Lycosa kulagini: Spassky, Luppova, 1945: 46 (D♂).

Lycosa asiatica Sytshevskaja, 1980: 229, figs 1–2 (D♀). **Syn.n.** The type series (♀♀) in ZISP, examined [Logunov, 2023].

See WSC [2025] for a complete set of references.

MATERIAL. Таjікistan: 1 ♂ 1 ♀ (ISEA, 001.4226; det. by A.A. Zyuzin as *Alopecosa k.*), Khatlon Oblast, Ilichevsk Distr., Gazimailik Mts, E slope, 7–8 km WNW of Ganjina Vil. [*c.* 37°59′N, 68°29′E] (Fig. 16), 1800 m a.s.l., 18.04.1991, S.V. Ovchinnikov; 1 ♀ (ISEA, 001.4265), same locality (Fig. 21), 850 m a.s.l., 20–21.04.1986, A.A. Zyuzin; 1 ♂ 7 ♀♀ (ZISP, ARA_ARA_0001035), same locality, 20.04.1985, A.A. Zyuzin; 1 ♂ (ISEA, 001.4303), same locality, 21.04.1986, A.A. Zyuzin; 1 ♀ (ISEA; Figs 12–15), Khatlon Oblast, Shahrtuz [*c.* 37°16’N, 68°08’E]



Figs 23–31. Copulatory organs and body of *Asiacosa ovchinnikovi* sp.n., holotype ♂ (23–25, 28, 29) and paratype ♀ (26, 27, 30, 31): 23, 28 — male bulbus, ventral view; 24 — same, retrolateral view; 25 — embolar division, apical view; 26 — epigyne, ventral view; 27 — vulva, dorsal view; 29 — male palp, ventral view; 30 — female body, ventral view; 30 — same, dorsal view. Scale bars: 0.1 mm (25–27), 0.25 mm (23, 24, 28, 29), 1 mm (30, 31).

Рис. 23–31. Копулятивные органы и тело *Asiacosa ovchinnikovi* sp.n., голотип ♂ (23–25, 28, 29) и паратип ♀ (26, 27, 30, 31): 23, 28 — бульбус самца, снизу; 24 — тоже, сбоку-сзади; 25 — эмболярный отдел, апикально; 26 — эпигина, снизу; 27 — вульва, сверху; 29 — пальпа самца, снизу; 30 — тело самки, снизу; 30 — тоже, сверху. Масштаб: 0,1 мм (25–27), 0,25 мм (23, 24, 28, 29), 1 мм (30, 31).

Figs 32–34. Body of *Asiacosa ovchinnikovi* sp.n., holotype ♂: 32 — dorsal view; 33 — lateral view; 34 — ventral view. Scale bars: 1 mm.
Figs 32–34. Тело голотипа-самца *Asiacosa ovchinnikovi* sp.n.: 32 — сверху; 33 — сбоку; 34 — снизу. Масштаб: 1 мм.

(lakes), 1–4.05.1974, A.P. Kononenko; 1 ♂ 3 ♀♀ (ISEA, 001.4269; Figs 9–11), Aktau Mt. Range, Vakhsh River valley, Mehnatobod Vil. [*c.* 37°43′N, 69°33′E], 1.02.1987, A.P. Kononenko; 4 ♀♀ (ISEA), same locality, 1.02.1976, A.P. Kononenko; 3 ♀♀ (ZMMU) & 2 ♀♀ (ISEA, 001.4291), Khatlon Oblast, S slope of Aktau Mt. Range, Garavuti (now Khurramdier) Vil. [*c.* 37°33′N, 68°28′E], 20.03.1974, A.P. Kononenko; 1 ♂ (ISEA, 001.4289), same locality, 7.04.1974, A.P. Kononenko; 3 ♂♂ (ISEA, 001.4290), same locality, 22.03.1974, A.P. Kononenko; 1 ♀ (ISEA, 001.4268), Kurgan-Tyube Oblast, Yavansky Distr., Chimsai stow [*c.* 38°06'N, 68°58'E], 700–750 m a.s.l., 18.04.1986, A.A. Zyuzin; 2 ♀♀ (ZISP, ARA_ARA_0001033), Kurgan-Tyube Oblast, Yavansky Distr., Vakhsh River valley, Chili-sai (apparently, Chimsai stow [*c.* 38°06′N, 68°58′E]), 17.04.1948, Luppova [119]; 1 ♀ (ISEA, 001.4255), Kurgan-Tyube Oblast, Panj Karatau Mts, W slope of Astana Mt., 2.8 km WSW of summit [*c.* 37°22.8′N, 69°12.8′E] (Fig. 19), 1020 m a.s.l., 26.04.1991, S.L. Zonstein; 1 ♂ (ISEA, 001.4253), same oblast, Vahsh Karatau Mts, 5 km NNW of Hojamaston Mt. [*c.* 38°01.6′N, 68°56.6′E], 850–1000 m a.s.l., 21.04.1990, S.L. Zonstein; 1 ♂ (ISEA, 001.4252), same oblast, Vahsh Karatau Mts, 5 km NNW of Hojamaston Mt. [*c.* 38°01.6′N, 68°56.6′E] (Fig. 20), 850 m a.s.l., 24.04.1990, A.A. Zyuzin.

COMMENTS. Having examined numerous samples of this species, including three containing both sexes collected together (see above), it became clear that the species names *Asiacosa asiatica* (known from four females) and *A. kulagini* (known from the holotype male) [Logunov, 2023] are to be synonymised. Both species were described from Tajikistan from close type localities, and they simply represent opposite sexes of the same species — *A. kulagini* (by the principle of priority).

It is possible that the material listed above for *A. kulagini* actually contains two species, especially among samples containing only females. In one female from Shahrtuz, the transverse chitinous bar of the epigyne is markedly lowered in its central part, making it appear as a pair of transverse-triangular elevations with a decreased space between them (Fig. 12). The vulva of this female is still in full agreement with the illustrations of the syntypes (cf. Fig. 13 with fig. 2 in Sytshevskaja [1980] and figs 60–61 in Logunov [2023]). However, in another sample containing both sexes (1 ♂ 3 ♀♀; ISEA, 001.4269), at least one of the females looks almost identical to the female from Shahrtuz (Fig. 11). Therefore, in this case, it has been concluded that such epigynal structure reflects variation rather than species differences.

DISTRIBUTION. Southern Tajikistan (Map). The species occurs in various open habitats (Figs 16, 18–22), where females (but apparently both sexes) dig burrows (some 1.5 cm in diameter and up to 12 cm deep) with silk turrets that are covered with trapdoors [Sytchevskaja, 1980: sub *Lycosa asiatica*; Logunov, 2023].

Asiacosa ovchinnikovi **sp.n.**
Figs 23–34, Map.

TYPES. Holotype ♂ (ISEA, 001.4202; Figs 23–25, 28, 29, 32–34), Tajikistan, Khatlon Oblast, Khovaling [*c.* 38°21'N, 69°59'E; *c.* 1400 m a.s.l.], cliffs, 11.10.1987, S.V. Ovchinnikov. — Paratypes: 2 ♀♀ (ISEA, 001.4202; Figs 26, 27, 30, 31), together with the holotype.

ETYMOLOGY. The new species is dedicated to the late arachnologist and friend of mine, Sergei V. Ovchinnikov (1958–2007; see Milko *et al.* [2010]), who collected the type series of this new species.

DIAGNOSIS. This species is distinct from all the described *Asiacosa* species by the following characters: the median apophysis hook-shaped, with it tip directed proximad (retrolateral in all other species (cf. Figs 23, 28 and 1, 9) and the epigyne with a pair of small, wide-spaced epigynal hoods (cf. Figs 26, 27 and 11, 12).

DISTRIBUTION. Only the type locality (Map).

DESCRIPTION. MALE (holotype), its left leg I is detached. Carapace 6.50 long, 4.65 wide. Eye sizes and interdistances: AME 0.45, ALE 0.28, PME 0.78, PLE 0.75, AME-AME 0.18, AME-ALE 0.05, PME-PME 0.43, PLE-PLE 1.13. Width of anterior eye row 1.40, second row 1.95, third row 2.13. Clypeus height 0.15, chelicera length 2.50. Abdomen 6.15 long, 3.25 wide. Length of leg segments: I 5.50 + 2.55 + 4.70 + 4.85 +2.75 (20.35); II 5.15 + 2.60 + 4.25 + 4.50 + 2.70 (19.20); III 4.70 + 2.10 + 3.90 + 4.90 + 2.65 (18.25); IV 6.15 + 2.40 + 5.00 + 6.70 + 3.25 (23.50). *Spination of leg I*: Fm d 1-2-3ap; Pt pr and rt -0-1; Tb pr and rt 1-1, v 2-2-2ap; Mt pr and rt 1-1-1sp, v 2-2-2ap. *Colouration* (Figs 32–34). Carapace sand-coloured, with two wide longitudinal bands of recumbent scales and whie median and tw wide marginal bands of recumbent scales. Strenum light yellow, sparsely covered with brown protruded hairs. Labium and endites yellow, with white apexes. Chelicerae brownish yellow. Abdomen: dorsum yellow, with a colour pattern of paired brownish patches; sides and venter sand-coloured. All legs orange-yellow. Palps yellow, but cymbium tinged with brownish. Palpal structure as in Figs 23–25, 28, 29: bulbus elongated (1.4 times longer than wide); subtegulum elongated and large, situated in proximal-mesal position (at eight o'clock); tutaculum is situated at one o'clock; tegulum with a wide whitish membrane covering the basal part of median apophysis; median apohysis triangular and hook-shaped, with its extension directed proximad; synembolus absent; embolus rapier-shaped, with wide, well-developed *pars pendula*; membranous conductor wide and low.

FEMALE (paratype). *Measurements*. Carapace 7.25 long, 4.85 wide. Eye sizes and interdistances: AME 0.33, ALE 0.33, PME 0.90, PLE 0.68, AME-AME 0.18, AME-ALE 0.13, PME-PME 0.30, PLE-PLE 1.38. Width of anterior eye row 1.65, second row 2.20, third row 2.40. Clypeus height 0.30, chelicera length 3.30. Abdomen 7.40 long, 5.00 wide. Length of leg segments: I 5.50 + 2.75 + 4.00 + 3.75 + 2.25 (18.25); II 5.00 + 2.40 + 3.80 + 3.75 + 2.10 (17.05); III 4.60 + 2.40 + 3.30 + 4.50 + 2.30 (17.10); IV 6.10 + 2.60 + 4.50 + 6.50 + 3.00 (22.70). *Spination of leg I*: Fm d 1-2-3ap; Pt pr 0-1-0; Tb pr 1-1, v 2-2-2ap; Mt pr 1-1-1ap, v 2-2-2ap. *Colouration* (Figs 30, 31), as in the male, but labium and endites orange-yellow and chelicerae darker (brown). Palpal Tr with apical claw. Epigyne and vulva as in Figs 26, 27: epigyne without septal pedicel, as transeverse chitinous bar, but its central part lowered; two small but noticeable, wide-spaced epigynal hoods present; vulva with short staright ducts and ovoid receptacles; fertilization ducts prominent, directed latero-anteriad.

Conclusion

Based on the results of this study, the genus *Asiacosa* currently consists of five species, two of which are known from both sexes, two from the females and one from the males [WSC, 2025; present data]. The natural history and burrowing behaviour of only one *Asiacosa* species — *A. kulagini* — was described [Sytshevskaja, 1980: sub *Lycosa asiatica*]. Females of this species dig burrows with silk turrets at their entrances that are covered with trapdoors [Sytshevskaja, 1980: figs 3–5]. Based on available data, it appears that in Middle Asia the males of *A. kulagini* are likely to be collected from February to April, while the females from March to May. That said, both sexes of *A. ovchinnikovi* sp.n. were collected in October and at the elevation of some 1400 m.

Apparently due to the hidden lifestyle and limited time when adults can be found in the wild, *Asiacosa* species are poorly represented in museum collections. The collection of 41 *Asiacosa* specimens studied in this paper was assembled by A.A. Zyuzin with the assistance of several arachnologists during at least two decades. New *Asiacosa* species are to be expected not only from Middle Asia, but also from Afghanistan, Iran and the Near East.

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References

Denis J. 1947. Results of the Armstrong College expedition to Siwa Oasis (Libyan desert), 1935. Spiders [Araneae] // Bulletin de la Société Fouad 1er d'Entomologie. Vol.31. P.17–103.

Logunov D.V. 2010. On new central Asian genus and species of wolf spiders (Araneae: Lycosidae) exhibiting a pronounced sexual size dimorphism // Proceedings of the Zoological Institute of the Russian Academy of Sciences. Vol.314. No.3. P.233–263.

Logunov D.V. 2021. [Alexei Alexandrovich Zyuzin – 70 years] // Arthropoda Selecta. Vol.30. No.1. P.133–141 [in Russian].

Logunov D.V. 2023. Further notes on the fossorial wolf spiders of Middle Asia and the Near East (Aranei: Lycosidae) // Arthropoda Selecta. Vol.32. No.4. P.475–512. doi:10.15298/arthsel.32.4.12

Milko D.A., Belousov I.A., Gromov A.V., Kabak I.I., Kataev B.M., Koval' A.G., Medvedev G.S. 2010. [In memory of S.V. Ovchinnikov (1958–2007)] // Entomologicheskoe Obozrenie. Vol.89. No.3. P.682–690 [in Russian].

Ovchinnikova O.G., Volkovitsh M.G., Fet V.Ya. 2021. [Remembering Victor Anatolievich Krivokhatsky (January 20, 1954 – August 18, 2021)] // Caucasian Entomological Bulletin. Vol.17. No.2. P.499–509 [in Russian and Engish].

Shorthouse D.P. 2010. SimpleMappr, an online tool to produce publication-quality point maps. Available from: http://www.simplemappr.net (accessed on 8 January 2025).

Sytshevskaja V.I. 1980. [A new species of the genus *Lycosa* Latr. (Aranei, Lycosidae) from Tajikistan] // Entomologicheskoe Obozrenie. Vol.59. No.1. P.229–232 [in Russian, with English summary].

Volkovitsh M.G., Ovchinnikova O.G., Samartseva Yu.V., Belokobylskij 2021. [In memoriam: Victor Anatolievich Kryvokhatsky (1954–2021)] // Entomologicheskoe Obozrenie. Vol.100. No.4. P.953–976 [in Russian].

WSC 2025. World Spider Catalog. Version 25.5. Natural History Museum Bern. Online at: http://wsc.nmbe.ch, doi: 10.24436/2, accessed 14 January 2025.

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