



## Redescription of *Hippasa deserticola*, the northernmost species of *Hippasa* (Aranei: Lycosidae), with taxonomic notes on other species of the genus

## Переописание *Hippasa deserticola*, самого северного вида рода *Hippasa* (Aranei: Lycosidae), с замечаниями по систематике других видов рода

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**Abstract.** *Hippasa deserticola* Simon, 1889, **stat. resurr.**, thought to be a synonym of *H. partita* (O. Pickard-Cambridge, 1876) is revalidated and redescribed. Two names, *Trochosa loeffleri* Roewer, 1955, **syn. nov.**, and *H. afghana* Roewer, 1960, **syn. nov.**, are synonymised with *H. deserticola*; *H. cinerea* Simon, 1898, **syn. nov.**, is synonymised with *H. partita*. The distribution of *H. deserticola* is mapped based on the published data and the specimens examined. The embolic division and the tegular apophysis in two species belonging to different species groups are illustrated for the first time as well as modification of cuticle on the tibiae. The taxonomic status of *H. partita* is briefly discussed.

**Резюме.** Восстановлена валидность названия *Hippasa deserticola* Simon, 1889, **stat. resurr.**, ранее считавшегося синонимом *H. partita* (O. Pickard-Cambridge, 1876). Вид *H. deserticola* переописан. Два названия, *Trochosa loeffleri* Roewer, 1955, **syn. nov.**, и *H. afghana* Roewer, 1960, **syn. nov.**, синонимизированы с *H. deserticola*; *H. cinerea* Simon, 1898, **syn. nov.**, синонимизировано с *H. partita*. Ранее опубликованные и новые находки *H. deserticola* показаны на карте. Впервые проиллюстрированы эмболюсные отделы и тегулярные отростки двух видов, относящихся к разным группам видов, а также модификации кутикулы голени. Кратко обсуждается таксономический статус *H. partita*.

**Key words:** funnel-web wolf spiders, Central Palaeartic, redescription, Lycosidae, *Hippasa*, new synonyms

**Ключевые слова:** пауки-волки воронкопряды, центральная Палеарктика, переописание, Lycosidae, *Hippasa*, новые синонимы

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## Introduction

*Hippasa* Simon, 1885 is a relatively large genus with 36 named species and one subspecies occurring in Africa and Asia (World spider catalog, 2021). African and East Asian species of *Hippasa* are relatively well studied thanks to the revi-

sions (Alderweireldt & Jocqué, 2005; Wang et al., 2015), but the genus remains poorly investigated in the Central Palaeartic (i.e. Afghanistan, Middle Asia<sup>1</sup>, Iran) and India.

<sup>1</sup> The term “Middle Asia” is used here for the region comprising Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.

Only one species, *H. partita* (O. Pickard-Cambridge, 1876), is known from Middle Asia, being reported from Uzbekistan, Tajikistan and Turkmenistan (Mikhailov, 2013). During a collecting trip to Tajikistan, the senior author collected several specimens of *Hippasa*. In order to determine the species, we searched for all available material in the Zoological Museum of the Moscow State University, examined the types of *Hippasa loeffleri* (Roewer, 1955) from Iran and all publications that included West-Palaeartic species. The aim of this paper is to provide a detailed redescription of the Middle Asian *Hippasa* species and to discuss its peculiar copulatory organs as well as the taxonomic status of *H. partita*, the most widespread species of the genus (known from Egypt to Bangladesh).

## Material and methods

Specimens were photographed using an Olympus Camedia E-520 camera attached to an Olympus SZX16 stereomicroscope, and a SEM JEOL JSM-5200 scanning electron microscope at the Zoological Museum of the University of Turku, Finland. Digital images were prepared using CombineZP image stacking software. Illustrations of the endogyne were made after clearing in a 10% KOH aqueous solution.

The lengths of leg segments were measured on the lateral side. All measurements are given in millimeters.

The following abbreviations are used for morphological structures: *Aa* – anterior arm of tegular apophysis; *Cb* – base of cymbium; *Co* – conductor; *Em* – embolus; *Fe* – femur; *Ma* – mesal arm of tegular apophysis; *Mt* – metatarsus; *Pa* – prolateral arm of tegular apophysis; *Pl* – palea; *Pt* – patella; *Sc* – scape of epigyne; *Se* – synembolus; *St* – subtegulum; *Tg* – tegular groove; *Ta* – tarsus; *Ti* – tibia; *Ts* – tegular stalk.

The following abbreviations are used for description of spination in the tables: a – apical; d – dorsal; p – prolateral; r – retrolateral; v – ventral.

Abbreviations for the depositories of material examined are as follows: SMF – Senckenberg Museum, Frankfurt am Main, Germany; ZMMU – Zoological Museum of Moscow University, Russia.

## Taxonomy

### Order Aranei

### Family Lycosidae

### Subfamily Hippasinae

### Genus *Hippasa* Simon, 1885

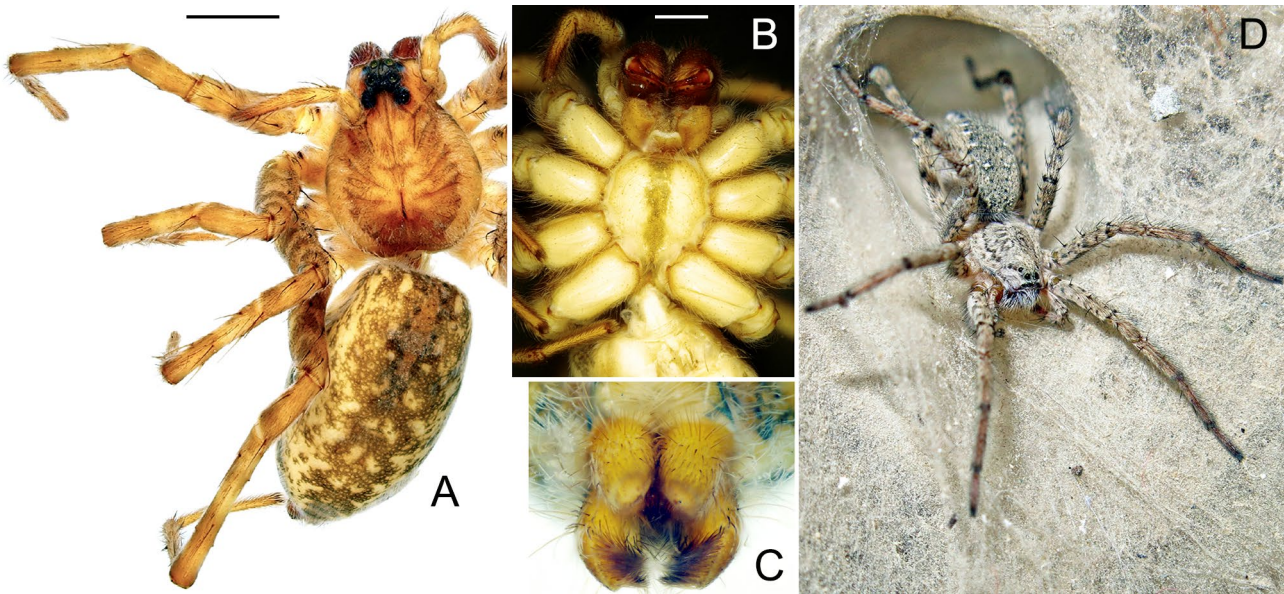
*Hippasa* Simon, 1885: 31; Roewer, 1960a: 977; Tikader & Malhotra, 1980: 272; Alderweireldt & Jocqué, 2005: 47; Wang et al., 2015: 232.

Type species: *Pirata agelenoides* Simon, 1884 (from Myanmar).

*Notes.* The subfamily Hippasinae includes only two genera, *Hippasa* Simon, 1885 and *Anomalomma* Simon, 1890 (Piacentini & Ramírez, 2019). The latter genus includes three species and is poorly known; its type species has never been illustrated.

The generic name *Hippasa* has no synonyms and almost all of its species were originally placed in this genus. The exceptions are a few species described by Thorell (1887), who placed three species in the genus *Diapontia* Keyserling, 1877 (currently known from South America). The subject of the present paper, *Hippasa deserticola* Simon, 1889, was placed in the genus *Trochosa* C.L. Koch, 1847 by Roewer (1955). Alderweireldt & Jocqué (2005) splitted the African species of *Hippasa* into two groups based on the shape of the tegular apophysis. The authors did not provide names for these species groups, but mentioned that one group contains several species closely related to the type of the genus, and the other group includes *H. australis* Lawrence, 1927, *H. funerea* Lessert, 1925, and *H. lamtoensis* Dresco, 1981. Wang et al. (2015) also splitted the genus into two species groups, *H. greenalliae* and *H. partita*, denoting which species belong in a particular group based on both the tegular apophysis and epigyne. There are some contradictions between the groupings of Alderweireldt & Jocqué (2005) and Wang et al. (2015): the former authors considered *H. partita* a nomen dubium because it was described based on the juvenile specimen, whereas Wang et al. (2015) considered it as a valid species.

Although Tikader & Malhotra (1980) surveyed the Indian species, the descriptions and illustrations provided by them as well as by some consequent authors (i.e. Patel & Reddy, 1993; Arora & Monga, 1994; Gajbe, 2004) do not include essen-



**Fig. 1.** Female of *Hippasa deserticola* Simon, 1889 from Tajikistan (A–C) and Iran (D). A, habitus in dorsal view; B, prosoma in ventral view; C, spinnerets in ventral view; D, female on its funnel web (photo by A. Zamani). Scale bars: 2 mm (A); 1 mm (B).

tial verbal descriptions or proper illustrations that can be used for identification. The type specimens of species described by Tikader cannot be located.

The structures of the male palp, particularly the tegular apophysis, embolic division and subtegulum, were not adequately illustrated. In all lycosids, the subtegulum is located proximally, either medially or prolaterally (i.e. in Pardosinae and in some Allocosinae). The subtegulum in *Hippasa*, however, is unlike that of most of the other lycosids in that it is located more distally on the prolateral side (Figs 2A and 5B), which is a plesiomorphic character. Of Lycosidae that have a transverse tegular apophysis (all Lycosinae, some Pardosinae, Sosippinae, Allocosinae, and Hippasinae), its tip is bifurcate only in *Hippasa* and *Allocosa* Banks, 1900 (see Simó et al., 2017, and Figs 2G, 4A, B and 6B, C). In *Hippasa deserticola*, however, the tegular apophysis is more complex, consisting of three parts (arms), one of which, the prolateral arm (*Pa*), is partially hidden by the tegulum (Figs 2A, G and 4A–C). In addition, the tegular apophysis of *H. deserticola* has a very dis-

tinct stalk, and while present in some Lycosinae, i.e. *Alopecosa aculeata* (Clerck, 1757) and *Lycosa praegrans* C.L. Koch, 1836, it is less distinct.

We found that in *H. deserticola*, both the palpal tibiae and leg tibiae have the cuticle modified on the dorsal side as a row of transverse wrinkles (Fig. 4G–I). It is probable that other species of *Hippasa* also possess this cuticular structure. This modification differs from that found in *Trochosa*, particularly *T. hispanica* Simon, 1870 (cf. Fig. 4J and Marusik & Nadolny, 2020: Fig. 9G), which has a row of smooth spots, lacking any wrinkles.

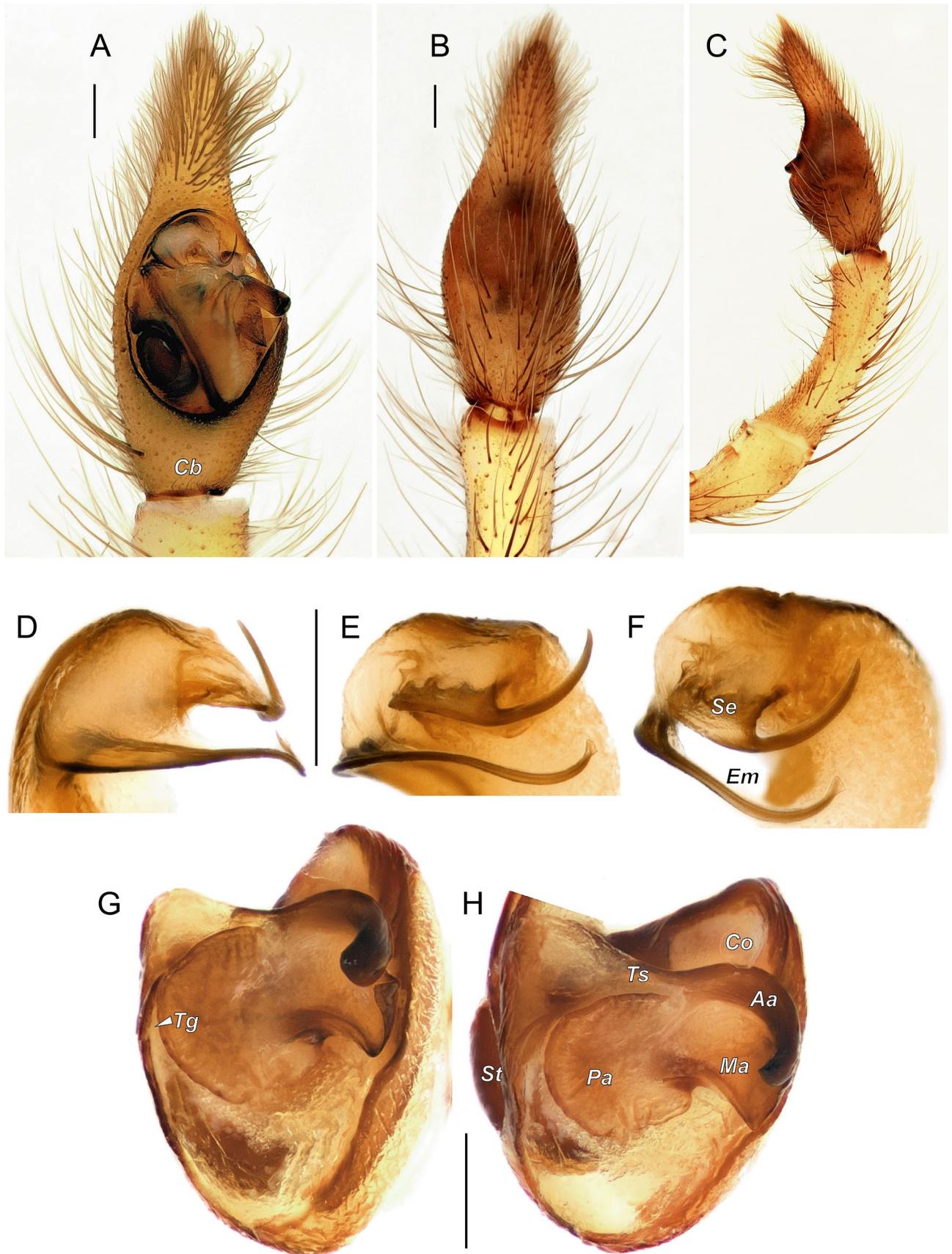
***Hippasa deserticola* Simon, 1889, stat. resurr.**  
(Figs 1, 2, 3A–E, 4A–I, 7)

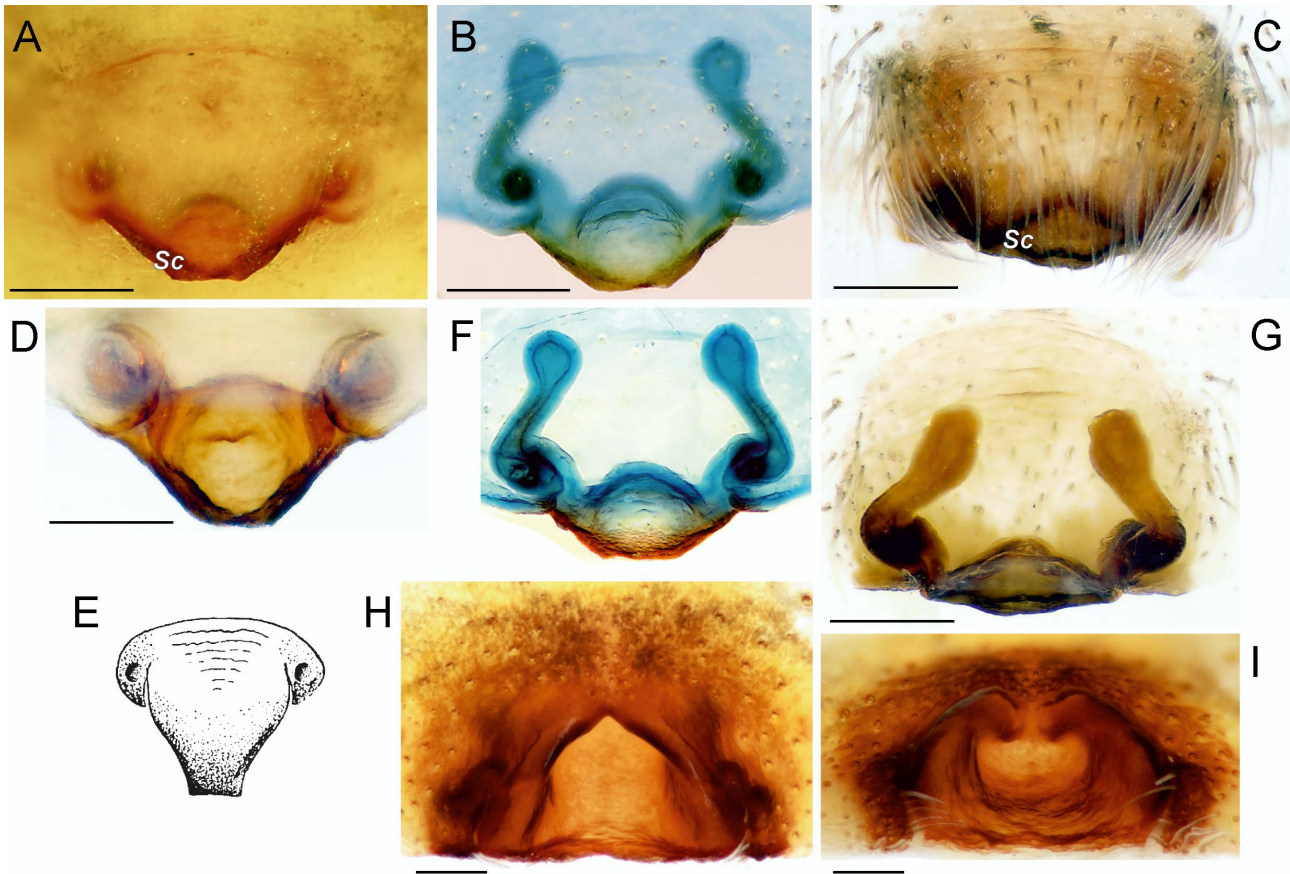
*Hippasa deserticola* Simon, 1889: 377 (male, female); Simon, 1897: 290 (synonymised with *H. partita*); Simon, 1898a: 323 (mentioned as synonym of *H. partita*); Simon, 1899: 479 (faunistic record).

*Trochosa löffleri* Roewer, 1955: 771, Fig. 22 (female), **syn. nov.**

*Hippasa afghana* Roewer, 1960b: 33, Fig. 25a–b (female), **syn. nov.**

**Fig. 2.** Male palp of *Hippasa deserticola* Simon, 1889 from Tajikistan. A–C, palp in ventral (A), dorsal (B) and retrolateral (C) views; D–F, embolic division in prolateral (D), ventral (E) and retrolateral (F) views; G, H, tegulum with dissected ventral part, ventral (G) and ventroapical (H) views. The abbreviations are listed in the “Material and methods” section. Scale bars: 0.2 mm.





**Fig. 3.** Epigynes of *Hippasa deserticola* Simon, 1889 (A, B, D–F, holotype of *H. loeffleri* Roewer, 1955, **syn. nov.**; C, G, specimens from Turkmenistan) and *H. lycosina* Pocock, 1900 (H, I, specimens from India). A–C, E, H, ventral view; F, G, dorsal view; D, I, posterior view. E, modified after Roewer (1955). The abbreviations are listed in the “Material and methods” section. Scale bars: 0.2 mm.

*Hippasa loeffleri*: Roewer, 1960b: 34.

*Hippasa domratchevae* Andreeva, 1976: 50, Figs 59–61 (male, female), **nomen nudum**.

*Trochosa loeffleri*: Brignoli, 1983: 459.

*Hippasa partita* (non O. Pickard-Cambridge, 1876): Mikhailov, 2013: 122 (distribution in the former Soviet Union; all records refer to *H. deserticola*).

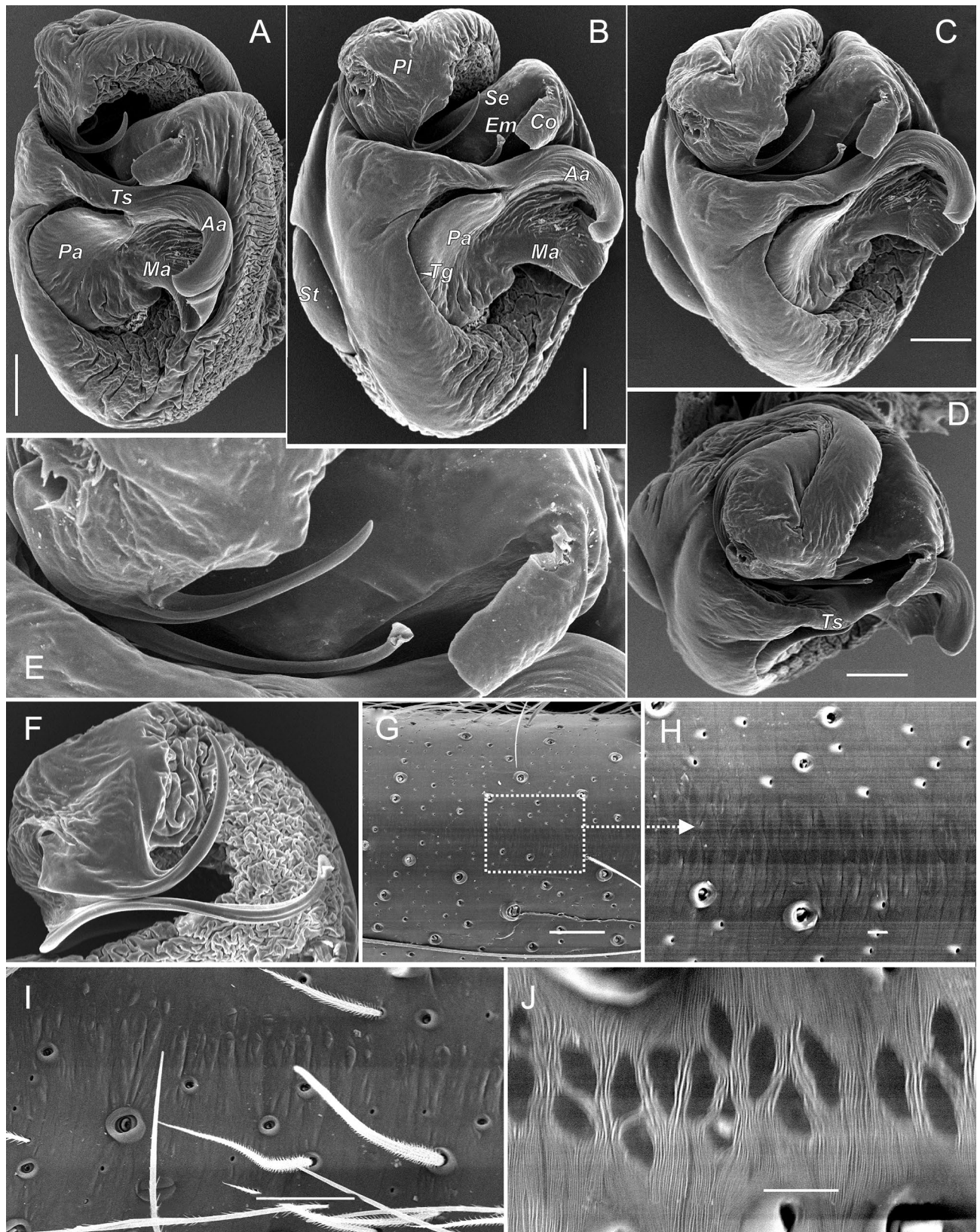
*Hippasa loeffleri*: Zamani, 2016: 160; Zamani et al., 2018: 192.

**Type material.** Syntypes of *Hippasa deserticola* (not examined), 1 male, 1 female, **Turkmenistan**, Imam-baba (41°50'N 60°08'E), Murgab (37°29'N 61°58'E) (possibly in Muséum national d'Histoire naturelle, Paris). Holotype of *Trochosa loeffleri* (examined), fe-

male, **Iran**, Pirbakran, 32°28'08.0"N 51°33'47.7"E, H. Loeffler leg., “Arachn. Coll. Rwr.-Lfd. No. 10481, No. 483, Typus” (SMF) (Figs 3A, B, D–F). Holotype of *Hippasa afghana*, female, **Afghanistan**, *Kandahar Prov.*, Kadjahkai [Kajaki]; paratype of *H. afghana*, female, same locality; both types lost (absent in Lund Museum; Maria Mostadius, pers. comm.).

**Additional material examined.** **Turkmenistan:** *Lebap Prov.*, Repetek, ca. 38°38'59.7"N 63°15'19.8"E, 19.IV.1993, S.V. Ovtchinnikov leg., 1 female (ZMMU); *Mary Prov.*: Badkhyz, near Morgunovka, ca. 35°17'35"N 62°23'35"E, 8.IV.1993, S.V. Ovtchinnikov leg., 1 male (ZMMU); *Kushka Distr.*, ca. 1.5 km NNE of Chemenibit, Kushka River valley, 35°28'21"N

**Fig. 4.** SEM micrographs of *Hippasa deserticola* Simon, 1889 from Tajikistan (A–E) and Turkmenistan (F–I), and *Trochosa hispanica* Simon, 1870 from Iran (J). A–D, bulbus in retrolateral (A), ventral (B), ventroapical (C) and apical (D) views; E, F, embolic division in ventroapical (E) and ventral (F) views; G, H, tibia I at different magnifications, dorsal view; I, palpal tibia in dorsal view; J, smooth hairless patches on tibia I, dorsal view. The abbreviations are listed in the “Material and methods” section. Scale bars: 0.1 mm (A–D, G); 0.01 mm (H, J); 0.05 mm (I).



62°24'32"E, ca. 520 m, 5.IV.2002, A.V. Gromov leg., 2 males, 1 female (ZMMU). **Uzbekistan:** Babatagh Mt. Range, Kafirnighan River valley, 25.IV.1994, S.V. Ovtchinnikov leg., 1 female (ZMMU). **Tajikistan, Khatlon Prov.:** env. of Panj [Pyandzh] Town, road along reed stand, 37°14'02.7"N 69°05'27"E, 351m, 5.V.2015, Yu.M. Marusik leg., 1 female (ZMMU); env. of Panj [Pyandzh] Town, clay cliff, 37°12'44.1"N 69°11'33.1"E, 387 m, 5.V.2015, Yu.M. Marusik leg., 2 males, 5 females (ZMMU); Tigrovaya Balka Reserve, riparian forest with thick litter, 37°10'27.5"N 68°23'02.8"E, 316 m, 6.VII.2015, Yu.M. Marusik leg., 2 females (ZMMU).

**Notes.** The World spider catalog (2021) indicates that Tikader & Malhotra (1980) synonymised *Hippasa deserticola* with *H. partita*, although this was actually done by Simon (1897, 1898a). Here we synonymise *H. cinerea* Simon, 1898, **syn. nov.**, with *H. partita* Pickard-Cambridge, 1876 (see the notes on *H. partita* below). Previously *H. partita* was recorded from Turkmenistan, Uzbekistan, and Tajikistan (Mikhailov, 2013). Two species, *H. deserticola* and *H. partita*, clearly differ in the shape of epigyne: with a scape and with a fovea, respectively (cf. Fig. 3A–C and Alderweireldt & Jocqué, 2005, Fig. 25: the holotype of *H. cinerea*). *Hippasa deserticola* belongs to the *H. greenalliae* group, whose epigynes have a scape and lack a fovea.

The examined specimens of *Hippasa* from Turkmenistan, Uzbekistan and Tajikistan belong to *H. deserticola*. Several specimens of *Hippasa* were collected in Turkmenistan (Badkhyz and Kushka River valley) near the type locality of *H. deserticola* (Murgab). We conclude that *H. deserticola* is the only species of the genus occurring in Middle Asia.

The original descriptions of *Hippasa deserticola* and *H. afghana*, whose types were not examined by us, and the characters of the holotype of *H. loeffleri* fit the species redescribed below, in the size, pattern and shape of the epigyne. Hence, we consider that *H. afghana*, **syn. nov.**, and *H. loeffleri*, **syn. nov.**, are synonyms of *H. deserticola*.

Apparently, Andreeva (1976) planned to describe a new species, *Hippasa domratchevae*, providing figures and indicating it as "sp. n." in the text of the manuscript but then recognised that another Middle Asian species, *H. deserticola*, had previously been synonymised with *H. partita*. Therefore,

Andreeva (1976) has not described a new species and rather provided comments on the species distribution. However, the figure legend and species heading have not been changed and thus her species name is considered as a nomen nudum.

Two species illustrated by Tikader & Malhotra (1980), *Hippasa pisaurina* Pocock, 1900 and *H. madhuae* Tikader et Malhotra, 1980, have the epigyne and particularly the vulva very similar to those of *H. deserticola* and may be its junior synonyms (see Fig. 8).

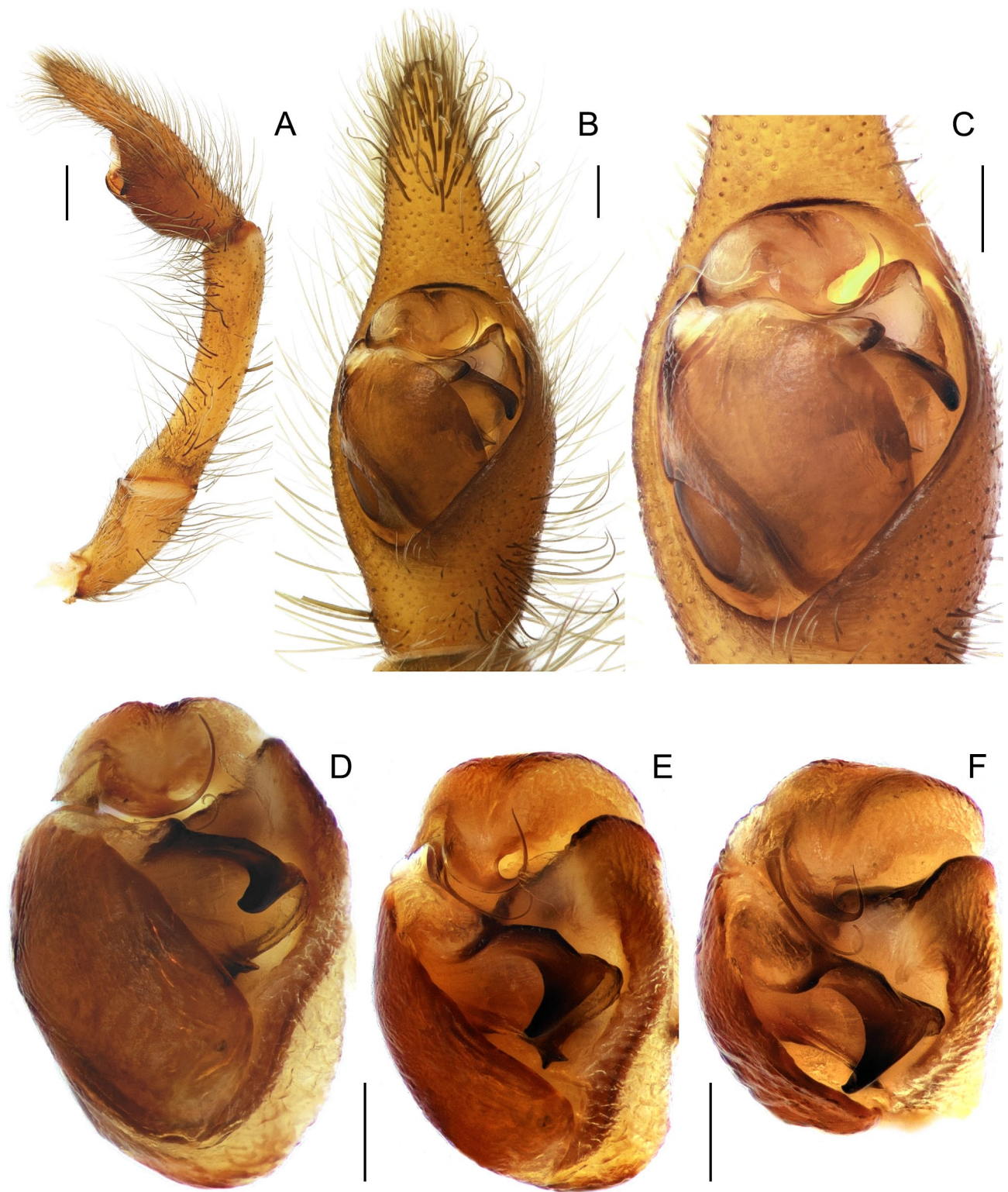
**Diagnosis.** Males of *H. deserticola* different from all congeners in distinct, long stalk of tegular apophysis (*Ts*), indistinct in other species (cf. Figs 2G, 4A and Figs 5D, E, 6C), and tegular apophysis occupying two-thirds of tegular width (*vs.* one-half or less in other species). Females of *H. deserticola* most similar to those of *H. lingxianensis* Yin et Wang, 1980 in having epigyne with scape extending posteriorly over epigastric furrow, obscuring fovea and copulatory openings. These two species differing in scape tip, that being rounded or truncated in *H. deserticola* and bilobate in *H. lingxianensis*. Scape of *H. lingxianensis* also longer than that of *H. deserticola*.

**Redescription.** *Male* (two specimens from Tajikistan). Total length 8.5–9.0; carapace 4.5–4.6 long, 3.2–3.5 wide. Lengths of palp and leg segments and spination of male with a carapace length of 4.5 given in Tables 1 and 2.

Carapace with white marginal stripes, grey submarginal area and yellowish middle part. Sternum yellow with dark grey median band. Chelicerae brown, with three promarginal and three retromarginal teeth. Palps yellow with grey spots. Legs yellow with grey spots and rings, covered with thick, short white setae and long black setae. All tarsi with scopula.

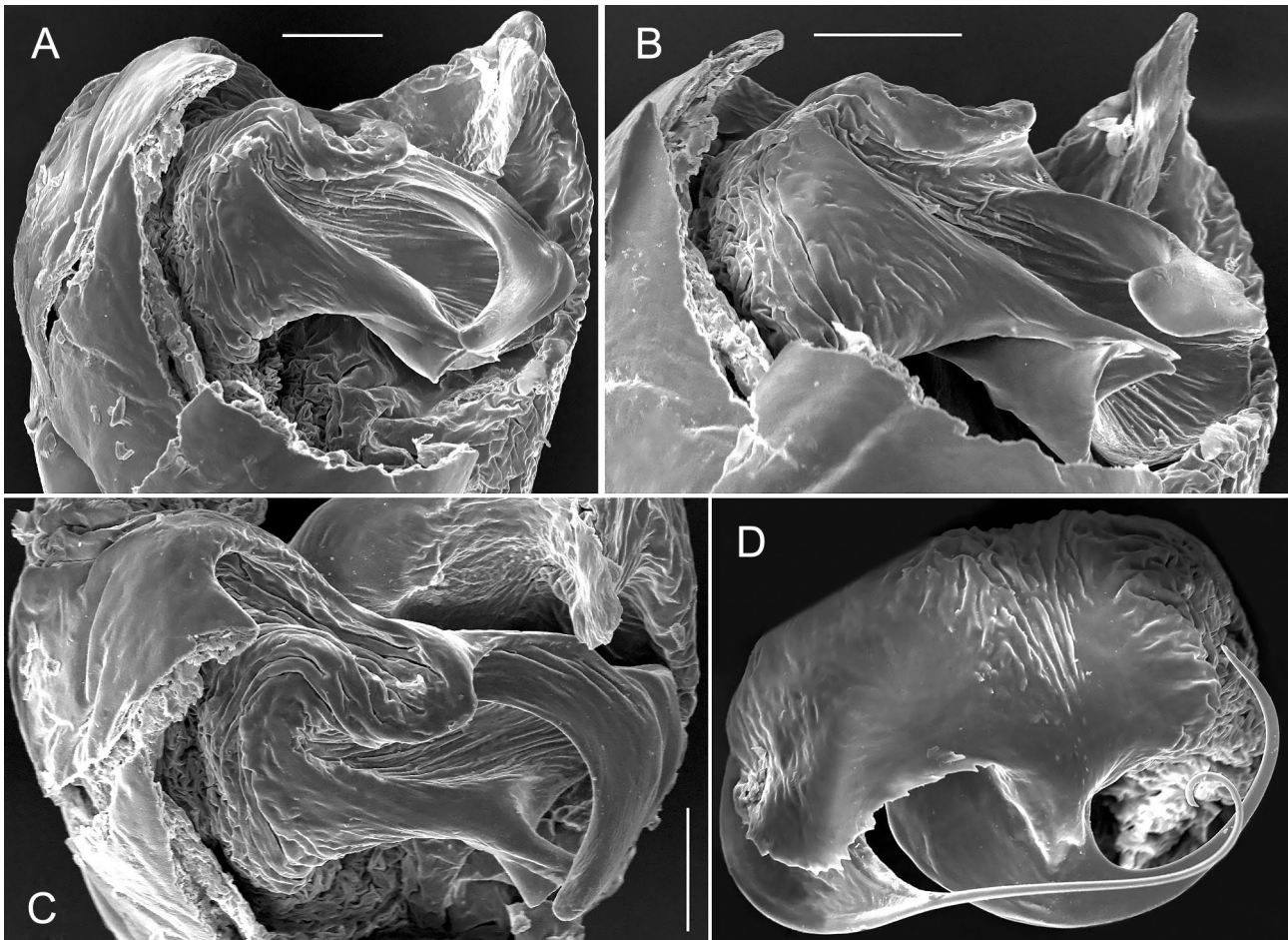
Abdomen: dorsum dark grey, with brown lanceolate cardiac mark and eight pairs of small patches of white setae; ventrum yellow with three grey longitudinal stripes and with a grey middle stripe anterior to epigastric furrow; lateral parts yellow with grey spots.

Patella with macrosetae resembling spines. Palp as in Figs 2 and 4A–F. Tibia slightly bent, thinner than patella; cymbium droplet-shaped, 1.2 times as long as tibia, 2.6 times as long as wide, its tip without claws, long, almost one-third of

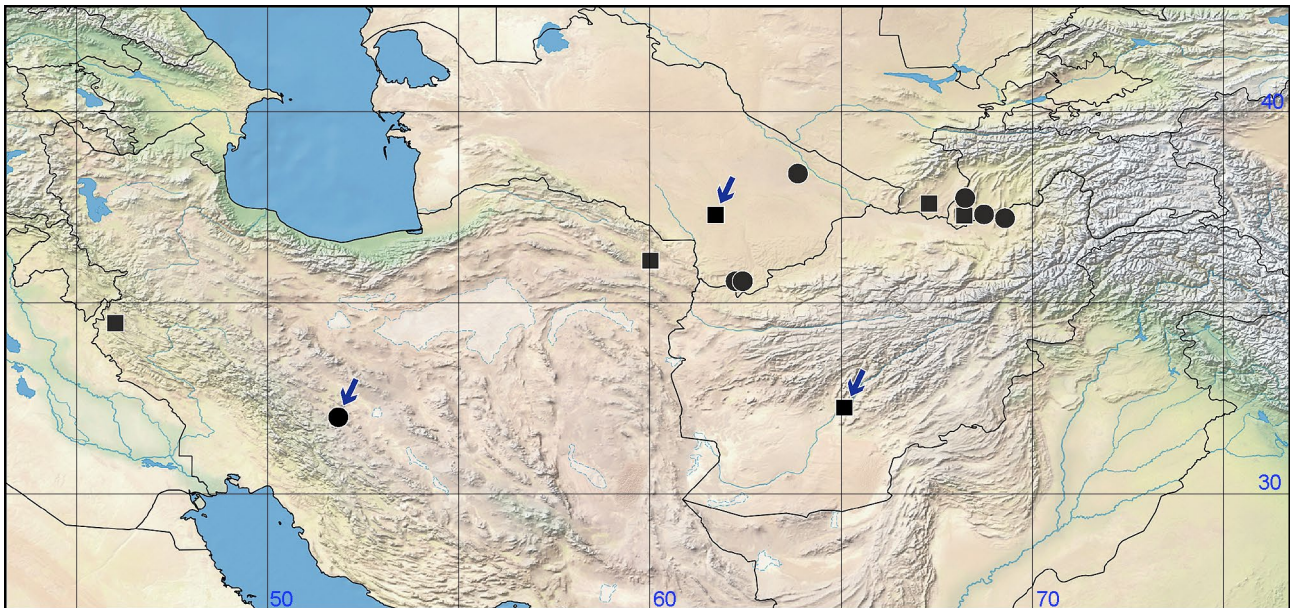


**Fig. 5.** Male palp of *Hippasa lycosina* Pocock, 1900 from India. **A, B**, palp in retrolateral (A) and ventral (B) view; **C**, bulbus in ventral view; **D–F**, dissected bulbus in ventral (D), ventro-retrolateral-apical (E) and apical (F) views. Scale bars: 0.5 mm (A); 0.2 mm (B–F).





**Fig. 6.** SEM micrographs of *Hippasa lycosina* Pocock, 1900 from India. A–C, tegulum with dissected ventral part in ventral (A), posteroventral (B) and apical (C) views; D, embolic division in posteroventral view. Scale bars: 0.1 mm.



**Fig. 7.** Map with all known records of *Hippasa deserticola* Simon, 1889. Squares – published records; circles – material examined; arrows indicate the type localities.

cymbial length (0.36 times as long as cymbium); basal part of cymbium (Fig. 2A, *Cb*) high, only 0.5 times as long as tip; bulb 0.45 times as long as cymbium, oval; subtegulum large, as long as cymbial base height, located posteriorly in position between 7:00 and 8:30 o'clock. Retrolateral part of tegulum weakly sclerotised, prolateral part with straight sperm duct; tegular apophysis large, attached to tegulum by long stalk; apophysis with three arms: anterior (*Aa*), mesal (*Ma*) and prolateral (*Pa*); anterior arm an extension of the stalk, extending horizontally, with claw-like terminal part and rounded tip; mesal arm lamelliform, broad, with tip bent ventrally; prolateral arm largest, with rounded prolateral edge; edge located in groove (*Tg*) formed by tegulum, so that edge invisible on intact palp. Embolic division with small palea (*Pl*), smaller than tegular apophysis in ventral view, with long, spiniform, slightly

**Table 1.** *Hippasa deserticola*, lengths of palp and leg segments (mm).

	<i>Fe</i>	<i>Pt</i>	<i>Ti</i>	<i>Mt</i>	<i>Ta</i>	Total
Male						
Palp	2.2	1.1	1.4	–	1.6	6.3
Leg I	3.7	1.8	3.1	4.0	2.0	14.6
Leg II	4.0	1.8	3.2	4.1	2.0	15.1
Leg III	3.9	1.6	3.0	4.2	1.8	14.5
Leg IV	4.8	1.8	4.0	6.2	2.5	19.3
Female						
Leg I	3.8	1.9	3.0	3.6	1.9	14.2
Leg II	4.0	1.9	2.9	3.5	1.9	14.2
Leg III	4.0	1.8	2.9	3.9	1.9	14.5
Leg IV	5.2	2.0	4.3	6.2	2.6	20.3

**Table 2.** *Hippasa deserticola*, leg spination.

	<i>Fe</i>	<i>Ti</i>	<i>Mt</i>
Male			
Leg I	d3 p2 r3	p2 r1 v1-1-2a	p2 r1a v2-2-3a
Leg II	d3 p3 r3	p2 r1 v1-1-2a	p3 r1a v2-2-3a
Leg III	d3 p3 r3	d2 p2 r2 v1-1-2a	p3 r3 v2-2-3a
Leg IV	d3 p3 r1	d2 p2 r2 v3-3	p3 r3 v2-2-3a
Female			
Leg I	d3 p2 r3	p2 v3-3	p2 r1a v2-2-3a
Leg II	d3 p3 r3	p2 r1 v1-1-2a	p2 r1a v2-2-3a
Leg III	d3 p3 r3	d2 p2 r2 v1-1-2a	p3 r3 v2-2-3a
Leg IV	d3 p3 r1	d2 p2 r2 v1-2-2a	p3 r3 v2-1-2-3a

bent synembolus, and sinuous, filiform embolus with slightly widened tip.

*Female.* Holotype of *H. loeffleri*: total length 11.2; carapace 4.8 long, 3.5 wide; leg I: 10.0 (3.4, 1.6, 2.4, 3.0, 1.6). Specimens from Tajikistan (n = 8): total length 9.2–12.3; carapace 4.2–5.3 long, 3.1–3.8 wide. Lengths and spination of legs of female with carapace length of 5.3 given in Tables 1 and 2.

Pattern as in male.

Epigyne as in Fig. 3A–G, trapezoidal, with scape (*Sc*) extending beyond epigastric furrow. Epigyne covered with long pale setae. Length and shape of scape slightly variable. Copulatory opening and fovea obscured beneath the scape. Receptacles as long as scape width; receptacle with more or less distinct stalk and broader head; accessory gland absent.

*Habitats.* Some of the specimens from Panj were collected at the edge of water bodies with reeds. The retreats of their small funnel webs were near the water. Another set of specimens was collected on clay cliffs.

*Distribution* (Fig. 7). According to the new material and the published data (including the data on species considered here as new synonyms; see the references above), this species is distributed from western Iran (Kermanshah) to Tajikistan (Panj Town), and from Turkmenistan (Repetek Reserve) to the north, to central Iran (Isfahan) and southern Afghanistan to the south.

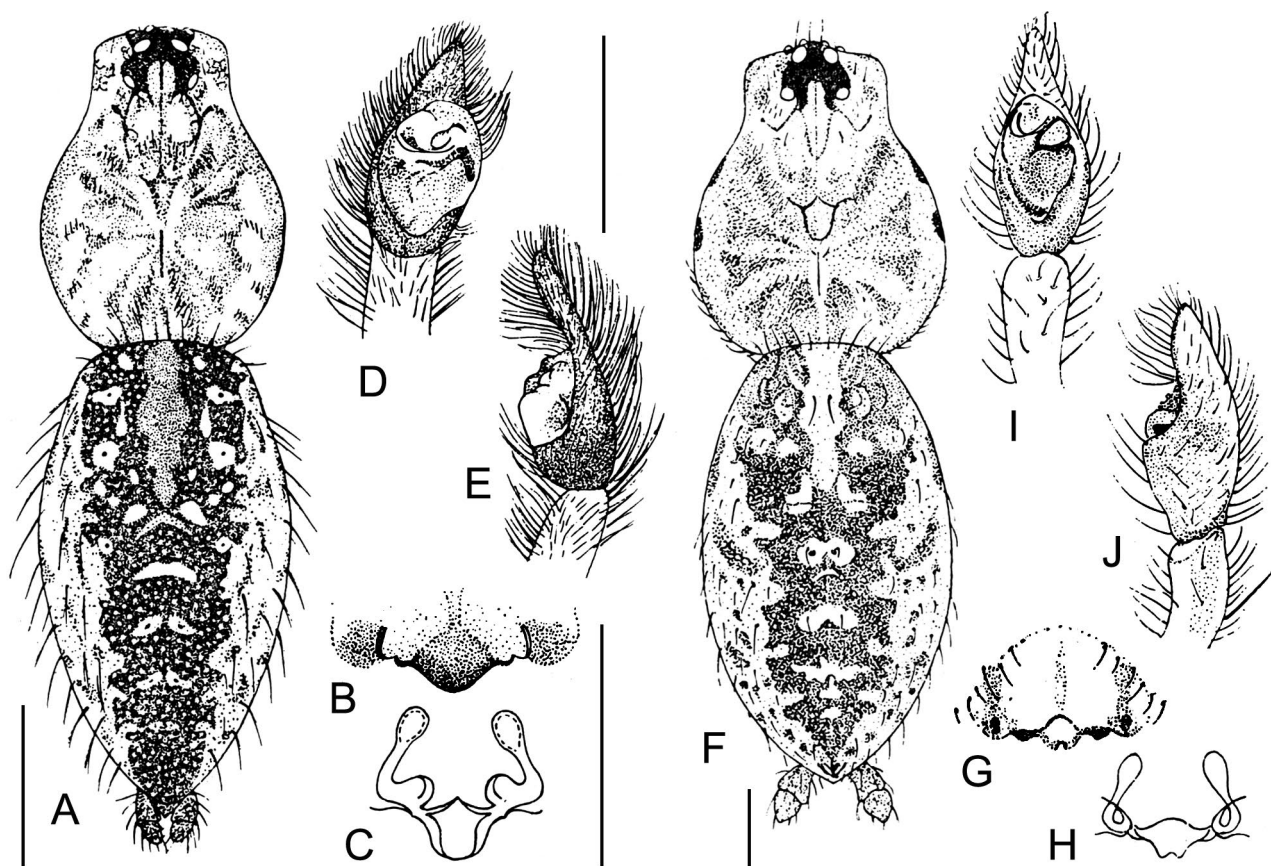
***Hippasa lycosina* Pocock, 1900**  
(Figs 3H, I, 5, 6)

*Hippasa lycosina* Pocock, 1900: 250; Wang et al., 2015: 240, Figs 7A–D, 8A–G (male, female).

For the complete list of references, see World spider catalog (2021).

*Material examined. India:* Uttar Pradesh, Gobind Ghat Vill., 32°37'30"N 79°33'30"E, 1900 m, 17–23.V.1999, Yu.M. Marusik leg., 1 male, 1 female (ZMMU); Himachal Pradesh, Patlikuhl Town, 32°07'24"N 77°08'48"E, 1200 m, May–June 1999, Yu.M. Marusik leg., 6 females (ZMMU).

*Notes.* Wang et al. (2015) adequately redescribed this species. It belongs to the *H. partita* species–group sensu Wang et al. (2015). We provide the figures of this species to illuminate the differences between the members of the two spe-



**Fig. 8.** *Hippasa pisaurina* Pocock, 1900 (A–E) and *H. madhuae* Tikader et Malhotra, 1980 (F–J), total view and details; modified after Tikader & Malhotra (1980). A, F, dorsal view of female (legs omitted); B, G, epigyne; C, H, internal female genitalia; D, I, left male palp in ventral view; E, J, left male palp in lateral view. The letters of the figures correspond to the numbers of them in op. cit.: A–E for 111–114 and F–J for 106–109. Scale bars: 2 mm (A), 0.5 mm (B, C, G, H), 1 mm (D–F, I, J). Both species may be conspecific with *H. deserticola* (see text).

cies groups in the shape of the tegular apophysis. The tegular apophysis of *H. lycosina* lacks a pro-lateral arm, and the stalk is less evident that it is in *H. deserticola*.

**Distribution.** This species is known from India and China (World spider catalog, 2021). In China, it is distributed to 26°N (Wang et al., 2015); in India, it is known north to Dehradun, 30°18'N (Tikader & Malhotra, 1980). Our record extends the distribution by more than 2° northward.

***Hippasa partita*** (O. Pickard-Cambridge, 1876) (Fig. 9A–F)

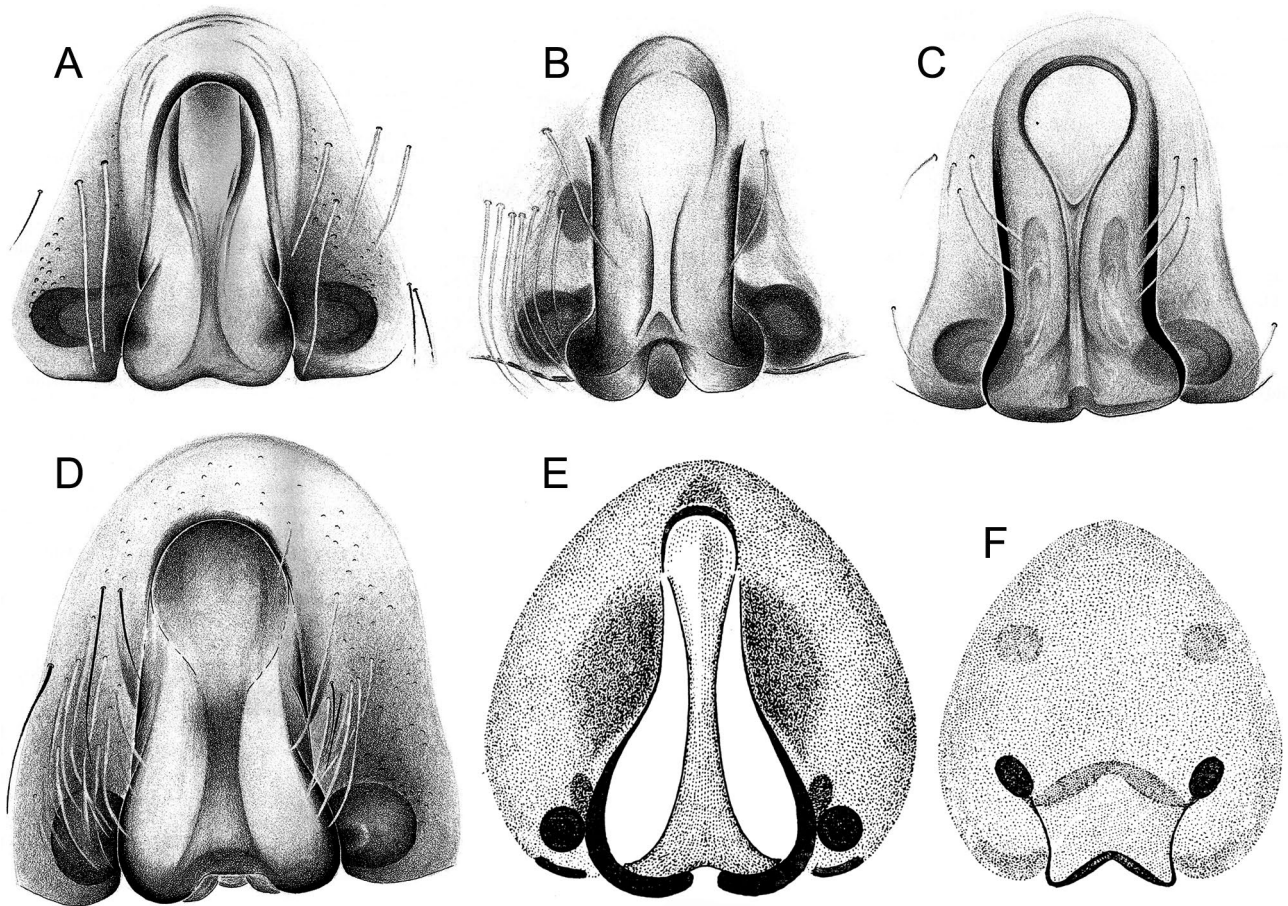
*Trochosa partita* O. Pickard-Cambridge, 1876: 599 (male, female).

*Hippasa cinerea* Simon, 1898b: 25 (female); Alderweireldt & Jocqué, 2005: 56, Figs 2–8, 23–30 (male, female); **syn. nov.**

*Hippasa partita*: Roewer, 1960a: 980, Fig. 541a–b (female); Tikader & Malhotra, 1980: 291, Figs 97, 98 (female; according to Alderweireldt & Jocqué, 2005, figures refer to a subadult syntype female); Alderweireldt & Jocqué, 2005: 63 (considered as nomen dubium, because syntypes were found be subadult females).

For the complete list of references to *H. cinerea*, see World spider catalog (2021).

**Notes.** Alderweireldt & Jocqué (2005) reexamined three syntypes of *H. partita* from Egypt and found them to be juveniles, viz. “three inadult females”. However, O. Pickard-Cambridge (1876) and Roewer (1960a) stated that the females were adults, and Roewer (1960a: Fig. 543) (Fig. 9E) provided a figure of the epigyne of the specimen either from Egypt or from “Palestine”. His figure is similar to the epigyne of the holotype of *H. cinerea*



**Fig. 9.** *Hippasa cinerea* Simon, 1898, **syn. nov.** (A–D, F) and *H. partita* (O. Pickard-Cambridge, 1876) (E), epigyne; modified after Alderweireldt & Jocqué (2005) (A–D) and after Roewer (1960a) (E, F). A [25], holotype of *H. cinerea*; B [26], holotype of *H. foveifera* Strand, 1913; C [27], holotype of *H. catenulata* Roewer, 1960; D [28], specimen from Liberia. The numbers of figures in brackets correspond to those in the original publications, including E [541a] and F [543].

illustrated by Alderweireldt & Jocqué (2005) (Fig. 9A, B). Yet, Roewer's (1960a) figures of the epigyne of *H. cinerea* (Fig. 9F) are very different from those by Alderweireldt & Jocqué (2005) (Fig. 9A, B). The epigyne with a scape, as illustrated by Roewer, is unknown for African species.

There are only two species of *Hippasa* recorded from the present-day Egypt (Alderweireldt & Jocqué, 2005), *H. cinerea* and *H. sinai* Alderweireldt et Jocqué, 2005, and only *H. cinerea* is reported from the type locality of *H. partita*, Alexandria (Alderweireldt & Jocqué, 2005: 56). Therefore, we conclude that the name *H. cinerea*, **syn. nov.**, is a junior synonym of *H. partita*.

All recent publications that mentioned *H. partita* from Asia (Tikader & Malhotra, 1980: 291, Figs 97, 98 [female]; Barrion & Litsinger, 1995:

360, Fig. 211a–f [female]; Biswas & Raychaudhuri, 2007: 245, Figs 15–20 [female]; Gajbe, 2007: 496, Figs 228, 229 [female]; Ahmed et al., 2015: 2, Fig. 3 [female]) provided the figures of the epigyne only, not of the endogyne (vulva). Most likely, these authors have illustrated the pre-epigyne of subadult females that lacks receptacles, and dealt with different species.

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