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A review of the spider genus *Synageles* SIMON, 1876 (Araneae, Salticidae) in the fauna of Central Asia

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Abstract

This paper presents a revisional study of the genus *Synageles* in the fauna of Central Asia. Five species are found in the fauna present, four of them are redescribed and/or figured. Distributional maps for all species are provided as well. The male of *S. charitonovi* is described for the first time.

Introduction

According to NENILIN (1984a, 1985) there are five *Synageles* species occurring in Middle Asia, three of them (*S. ramitus*, *S. venator* and *S. hilarulus*) being also recorded further east in Tuva, Mongolia and NW China (PRÓSZYŃSKI, 1982; ZHOU & SONG, 1988; LOGUNOV, 1992). Until now, the taxonomic status of *S. charitonovi* and *S. ramitus* was uncertain. For instance, NENILIN (1984a) was of opinion that the two species described and known up to now, from females only, (s. ANDREEVA, 1976) needed to be synonymized and hence the number of *Synageles* species in Central Asia should be reduced to four.
Thus, the main purpose of the current work is a revision of all *Synageles* species ever reported from Central Asia, including amplification of their distribution in this area and the redescription of certain species.

Material and methods

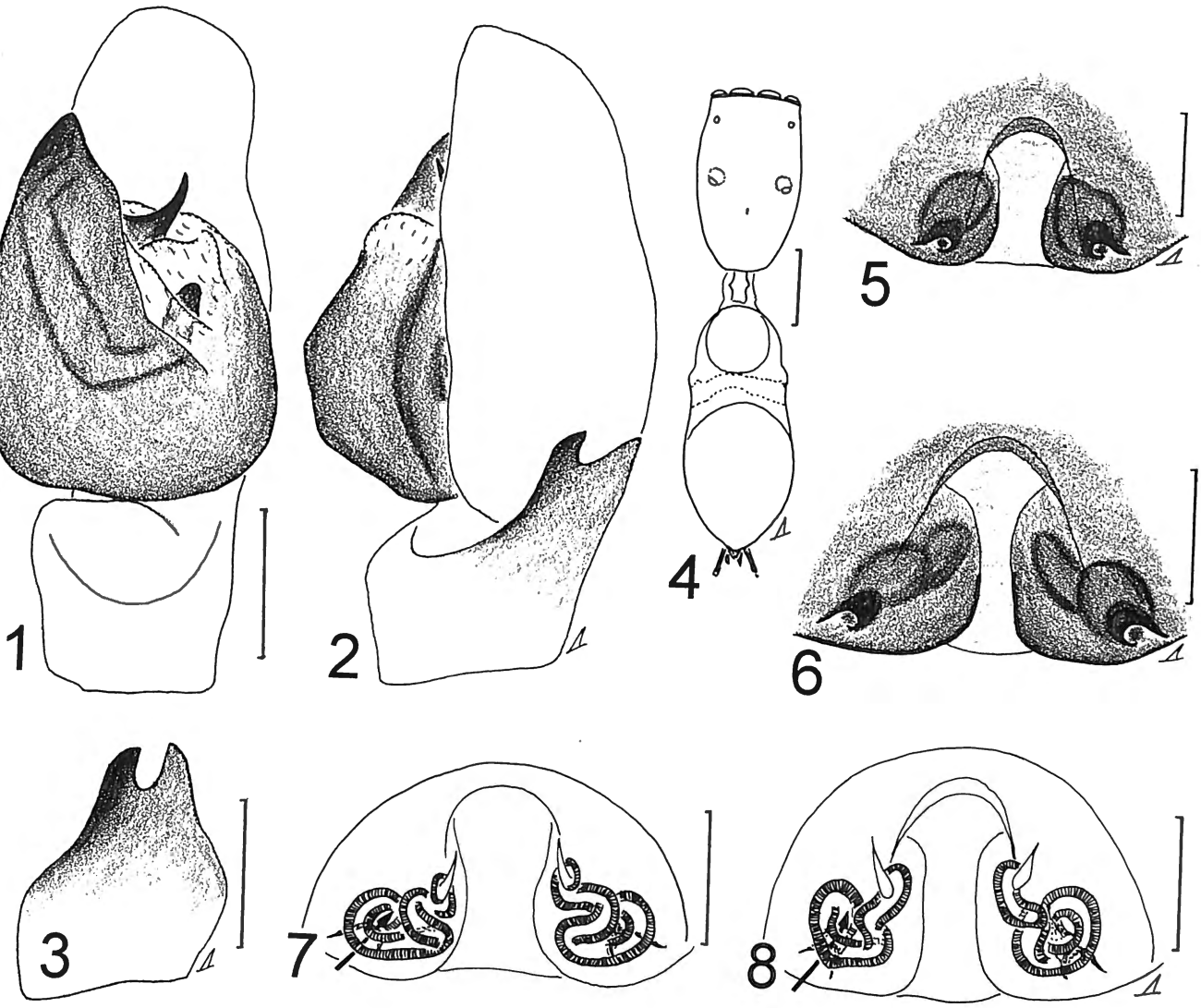
This work is based both on newly collected materials from Central Asia and on the arachnological collections deposited in the following museums:
HNHM- the Hungarian Natural History Museum, Budapest, Hungary;
ISE- the Zoological Museum of the Institute for Systematics and Ecology of Animals, Novosibirsk, Russia;
IZW- Institute of Zoology PAN, Warszawa, Poland;
RINS- the Royal Belgian Institute for Natural Science, Brussel, Belgium;
TU- the Zoological Museum of the Turku University, Turku, Finland;
ZISP- the Zoological Institute of Russian Academy of Science, St.-Petersburg, Russia;
ZMMU- the Zoological Museum of the Moscow State University, Moscow, Russia.
Only relevant literature concerned with the spider fauna of the territory studied is included in the text. For a complete list of the taxonomic sources for each species involved see KASTON (1945), THALER (1983), CUTLER (1988) and PRÓSZYŃSKI (1990).
The sequence of leg segments in measurement data is as follows: femur+patella+tibia+metatarsus+tarsus. All measurements are in mm.
For the leg spination the system adopted is that used by ONO (1988). Abbreviations used in the text: ap- apical; d- dorsal; Fm- femur; pr- prolateral; Pt- patella; rt- retrolateral; Tb- tibia; Mt- metatarsus; v- ventral.

Survey of species

Synageles charitonovi ANDREEVA, 1976
(figs 1-8, 14, 15, 21)

Synageles charitonovi ANDREEVA, 1976: 80, ff. 82-83 (female, holotype and paratypes from the IZW, examined).
S. c.: ANDREEVA, 1975: 17 (nomen nudum); PRÓSZYŃSKI, 1976: m. 207; NENILIN, 1984a: 31; Ibid, 1985: 131.

Material examined:
TAJIKISTAN: 1 female (IZW, paratype), the lower reaches of Vakhsh River, "Tigrovaya Balka" Reservation, 9-10.08.1969, E.M. Andreeva. - KAZHAKHSTAN: 1 male (ZMMU), Zhambyl Area, Moiynkumskiy Distr., Betpak-Dala Desert, ~13 km NE of Ulanbel', Kyzyltuz locality, 2.06.1990, A.A. Zyuzin & A.A. Feodorov. - TURKMENISTAN: 1 male (RINS), Repetek, 22.04.1993, D.V. Logunov; 2 male (ISE), same locality, 4.04.1989, O.V. Lyakhov; 1 male (RINS), Peski Station, 27.03.1990, O.V. Lyakhov. - UZBEKISTAN: 1 female (ISE), Bukantau Mts., Irlir Mountain, Karakuduk will, 9.05.1976, A.P. Kononenko.



Figs 1-8 – *Synageles charitonovi* ANDREEVA, 1976. 1 - male palp, ventral view; 2 - ditto, lateral view; 3 - tibial apophysis, dorso-lateral view; 4 - general appearance of male; 5, 6 - epigyne; 7, 8 - spermathecae. Scales: 1-3, 5-8 - 0.1 mm; 4 - 0.5 mm. Specimens: 1-4 - Turkmenistan, Repetek; 5, 7 - Tajikistan, Vakhsh River Valley (paratype); 6, 8 - Uzbekistan, Bukantau Mts.

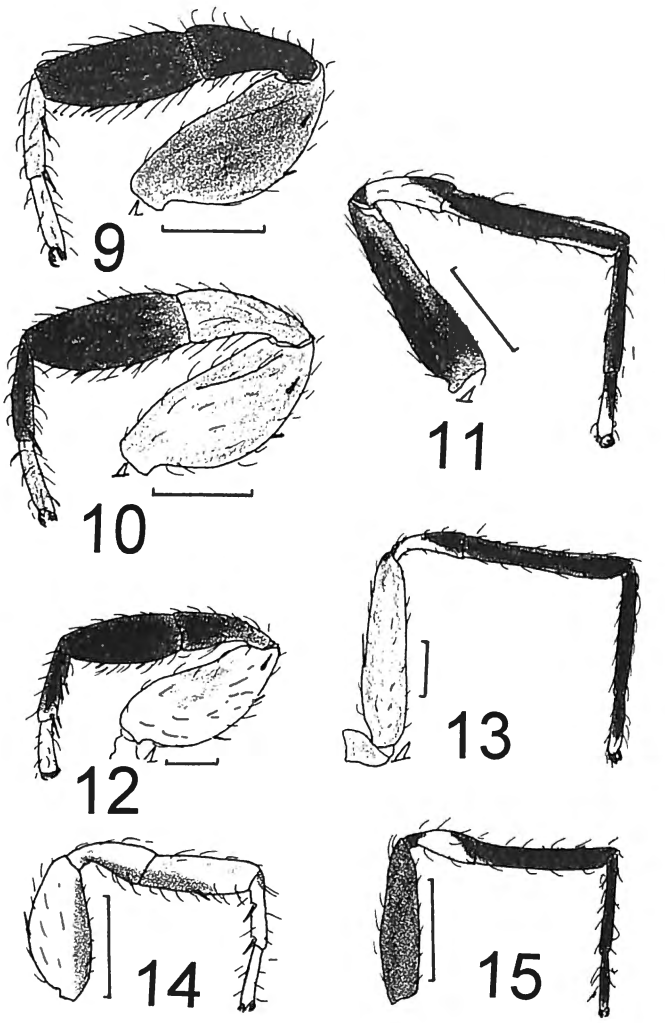
Diagnosis:
S. charitonovi is closely related to *S. ramitus*. Males differ in the shape of the tibial apophysis (cf. figs 2,3 and 24-26) and the shape of the tegulum (figs 1, 23). Females of *S. charitonovi* have an epigyne with a shorter and wider median groove (cf. figs 5, 6 and 29-31) and the spermathecae have quite separable structures (figs 7,8 and 32-34). Both species can be also distinguished by the leg colouration (especially in first legs) (cf. figs 9, 10 and 14).

Distribution:
The species is currently known to be restricted to several localities in Middle Asia only (fig. 21). Hitherto reported from Tajikistan: (''Tigrovaya Balka'' Reservation, Dushanbe, Kondara Canyon) (ANDREEVA, 1975, 1976). Records of *S. charitonovi* in Turkmenistan, Murgab (PRÓSZYŃSKI, 1979; NENILIN, 1984à; MIKHAILOV & FET, 1994) and NW China, Xinijiang (ZHOU & SONG, 1988; HU & WU, 1989) are herein found to have to be referred to *S. ramitus*.

Habitat:
The species may be collected in different sandy-desert landscapes, where it occurs under stones in pebble plots among *Tamarix* thicket or under sand grass *Aristida*.

Note:
One of the females (Tajikistan, Chiluchor-Chashma) (among the type specimens of *S. charitonovi*) reported by ANDREEVA (1976) was recognised to belong actually to *S. ramitus*.

Description:
MALE (from Repetek). Measurements. Carapace 1.30 long, 0.77 wide, 0.44 high at PLE. Ocular area 0.78 long,



Figs 9-15 – Male legs in *Synageles ramitus* ANDREEVA, 1976 (9-11), *Synageles lepidus* KULCZYŃSKI, 1897 (12, 13) and *Synageles charitonovi* ANDREEVA, 1976 (14, 15). 9, 10, 12, 14 - first male legs, prolateral view; 11, 13, 15 - fourth male legs, retrolateral view. Scales: 0.5 mm. Specimens: 9, 11 - Turkmenia, Badhyz; 10 - Tuva, Tere-Khol' Lake; 12, 13 - Pavlodar Area, Maliy Kalkaman Lake; 14, 15 - Turkmenistan, Repetek.

0.66 wide anteriorly and 0.66 wide posteriorly. Diameter of AME 0.21. Abdomen 1.53 long, 0.70 wide. Cheliceral length 0.15. Length of leg segments: Leg I: 0.67 + 0.44 + 0.49 + 0.36 + 0.26; leg II: 0.51 + 0.29 + 0.40 + 0.34 +0.26; leg III: 0.50 + 0.30 + 0.40 + 0.36 + 0.24; leg IV: 0.74 + 0.39 + 0.64 + 0.80 + 0.27. Leg spination. Leg I: Fm d 0-1, pr. 1 ap. ; Tb v 1-2; Mt v 2-2ap. Leg II: Fm d 1-1, pr. 1 ap. Leg III: Fm d 1-1. Leg IV: Fm d 1-1. Colouration. Carapace yellow-brown, with white spot of scales before fovea. Black around eyes. Sternum, maxillae , labium and chelicerae yellowish-brown. Abdomen dark grey, with a narrow tranverse white stripe on its narrower part (fig. 4). Dorsum with a pair of scutae. Book-lung covers yellow-brown. Spinnerets dark grey. Leg I completely yellow, prolaterally tinged with grey (fig. 14). Leg II: coxae, patellae and tibia light yellow, femora brownish, tarsi and metatarsi dark brown. Leg III: coxae, metatarsi and tarsi light yellow, remaining segments yellow, but prolaterally dark brown. Leg IV: coxae light yellow, remainig segments as in fig. 15. Palpal structure as in figs 1-3.

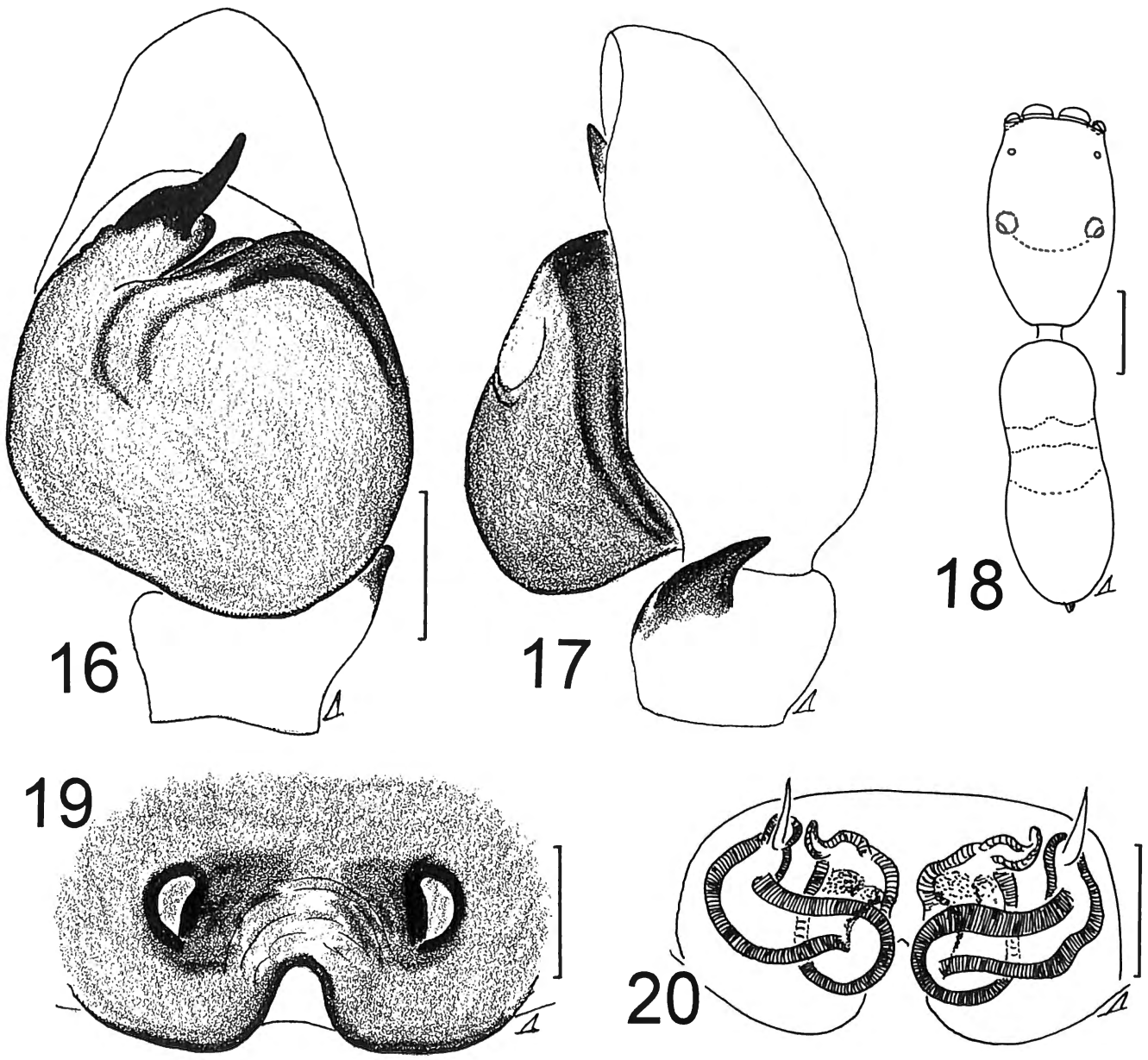
FEMALE (paratype). Measurements. Carapace 1.23 long, 0.65 wide, 0.42 high at PLE. Ocular area 0.70 long, 0.67 wide anteriorly and 0.69 wide posteriorly. Diameter of AME 0.22. Abdomen 1.50 long, 0.87 wide. Cheliceral length 0.15. Length of leg segments: Leg I: 0.50 + 0.38 + 0.38 + 0.25 + 0.20; leg II: 0.50 + 0.30 + 0.42 + 0.38 +0.30; leg III: 0.47 + 0.25 + 0.40 + 0.33 + 0.25; leg IV: 0.75 + 0.38 + 0.62 + 0.42 + 0.25. Leg spination. Leg I: Fm d 1-1; Tb v 1-1; Mt v 2-2ap. Leg II: Fm d 1-1; Mt v 1-2ap. Leg III: Fm d 1-1. Leg IV: Fm d 1-1; Mt v 1ap. Colouration. Carapace brown. Eye field orange. Sternum, labium, maxillae and chelicerae light brown. Palps white-yellow. Abdomen grey. Legs yellow with prolateral longitudinal brown lines. Epigyne and spermathecae as in figs 5-8.

Synageles hilarulus (C.L. KOCH, 1846)
(fig. 22)

S. h.: CHARITONOV, 1932: 172; PRÓSZYŃSKI, 1976: m. 203; NENILIN, 1984a: 31; 1984b: 142; 1985: 131; HEIMER & NENTWIG, 1991: 522, f. 1394; LOGUNOV, 1992: 66; MIKHAILOV & FET, 1994: 518.

Material examined:
KYRGHYZSTAN: 3 male, 3 female (ZISP), Bishkek env., 4.07.1980, S.L. Zonstein. - KAZAKHSTAN: 1 female (RINS), Pavlodar Area, Malyi Kalkaman Lake (W of Pavlodar), 6.06.1994, O.V. Lyakhov. - KHAKASSIA: 2 female (ISE), Altaiskiy Distr., ~40 km SE of Beliy Yar, ~3-5 km E of Novorossiyskoye, Berezovskoye Lake, 350-400 m elev, 22-23.06.1990, D.V. Logunov. - TUVA: 1 male (ISE), 5-7 km W of Kyzyl, 27.05.1990, D.V. Logunov.

Comments:
This is a trans-Eurasian subboreal species (see PRÓSZYŃSKI, 1976: m. 203). In Central Asia it was hitherto reported from Kyrghyzstan, Bishkek (NENILIN, 1984b,1985) and Tuva (Logunov, 1992). The record in Uzbekistan, Samarkand (KRONEBERG, 1875; CHARITONOV, 1932) was recognised to be based on juvenile specimens and hence should be excluded from the list of localities (see NENILIN, 1984a). Records in Turkmenistan (AZHEGANOVA, 1968; MIKHAILOV & FET, 1994) need confirmating by pertinent materials.
Besides the specimens reported above, we have studied 2 males and 5 females from Mongolia, but the true localities of these were not noted on the labels. Consequently, we have not included these specimens in the Material examined. The trustworthy localities of *S. hilarulus* in Central Asia are shown in fig. 22.



Figs 16-20 – *Synageles lepidus* KULCZYŃSKI, 1897. 16 - male palp, ventral view; 17 - ditto, lateral view; 18 - general appearance of male; 19 - epigyne; 20 - spermathecae. Scales: 16-17, 19-20 - 0.1 mm; 18 - 0.5 mm. Specimens: 16-18 - Pavlodar Area, Maliy Kalkaman Lake; 19, 20 - Kyrghyzstan, Bishkek.

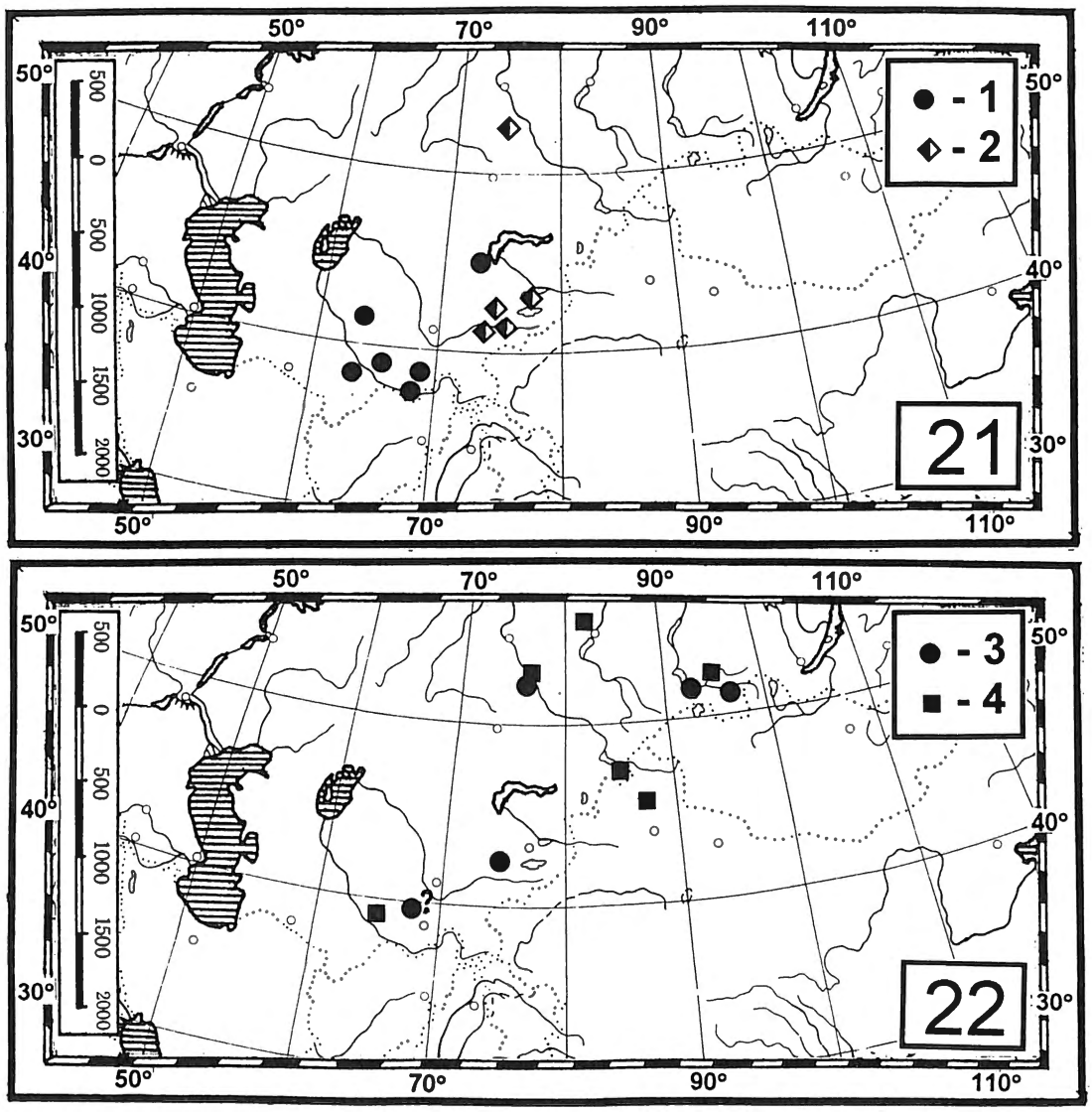
Synageles lepidus KULCZYNSKI, 1897
(figs 12, 13 16-21)

S. l.: SPASSKY & SHNITNIKOV, 1937; PRÓSZYŃSKI, 1976: m. 204; NENILIN, 1984a: 31; Ibid., 1984b: 141; Ibid., 1985: 131; ZONSTEIN, 1984: 148. *S. venator*: NENILIN, 1985: 131 (pro parte).

Material examined:
KAZHAKHSTAN: 1 female (RINS), Almaty, 29.06.1995, A.N. Ponomarenko; 2 male, 2 female (ISE), Pavlodar Area, Malyi Kalkaman Lake (W of Pavlodar), 6.06.1994, O.V. Lyakhov. - KYRGHYZSTAN: 1 female (ZMMU), Bishkek, 5.07.1983, S.V. Ovtchinnikov.

Diagnosis:
S. lepidus is closely related to *S. venator*, but can easily be separated by the absence of the apical hook of the tibial apophysis (cf. fig 17 and fig. 28 in THALER, 1983) and the structure of embolus in males, as well as by the structure of spermathecae in females (cf. figs 20 and 37, 39, 41).

Distribution:
The species seems to display a Central European - Middle Asian distributional pattern. It was hitherto recorded from Hungary (CHYZER & KULCZYŃSKI, 1897); Austria (THALER, 1983); Kyrghyzstan: Ferganskiy Mt. Range (NENILIN, 1984b) and Chatkal'skiy Mt. Range (ZONSTEIN, 1984); and Kazakhstan: Almaty (SPASSKY & SHNITNIKOV,



Figs 21-22 – Localities of *Synageles charitonovi* ANDREEVA, 1976 (1), *Synageles lepidus* KULCZYŃSKI, 1897 (2); *Synageles hilarulus* (C.L. KOCH, 1846) (3) and *Synagels venator* (LUCAS, 1836) (4) in Central Asia.

1937; NENILIN, 1984a). All the records in Central Asia are shown in fig. 21.

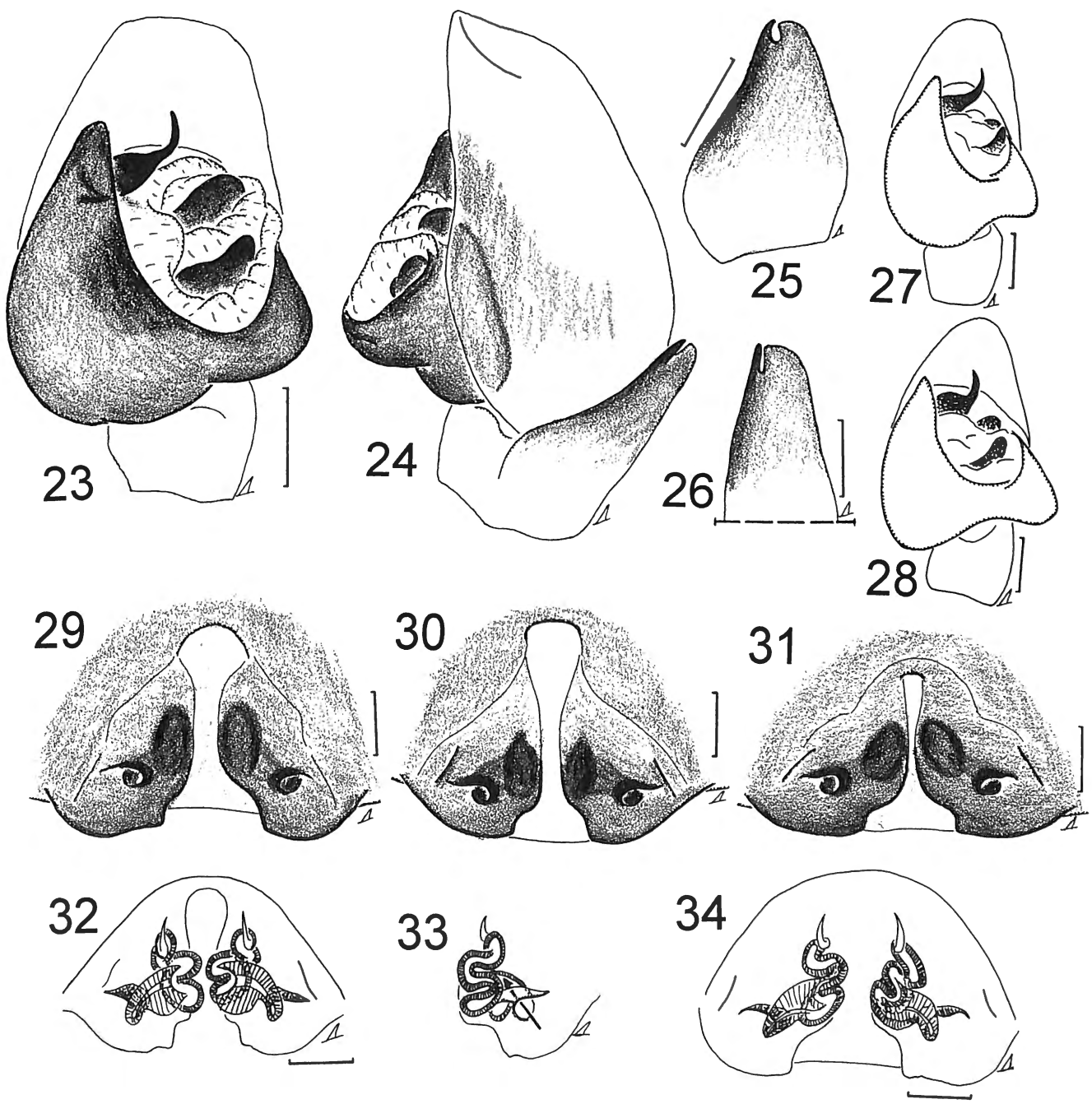
Habitat:
There is poor information about the habitat preferences of *S. lepidus*. THALER (1983) reported it from the "*Juniperetum sabinae*" in Austria, while SPASSKY & SHNITNIKOV (1937) collected this species from the trunk of *Betula sp.* in SE Kazakhstan.

Description:
MALE. Carapace 1.50 long, 0.87 wide and 0.62 high at PLE. Abdomen 1.87 long, 0.80 wide. Cheliceral length 0.25. Ocular area 0.80 long, 0.75 wide anteriorly and 0.70 wide posteriorly. Diameter of AME 0.22. Length of leg segments: leg I: 0.75 + 0.50 + 0.62 + 0.40 + 0.33; leg II: 0.67 + 0.38 + 0.60 + 0.45 + 0.35; leg III: 0.62 + 0.38 + 0.50 + 0.47 + 0.33; leg IV: 0.87 + 0.43 + 0.87 + 0.62 + 0.38. Leg spination. Leg I: Fm d 1-1, pr 1ap. ; Tb v 1-2-2ap; Mt v 2-2ap. Leg II: Fm d 1-1ap. , pr 1ap. ; Mt v 0-1-2ap. Leg III: Fm d 1-1, pr 1ap. ; Mt v 3ap. Leg IV: d 1-1; Tb v 1ap. ; Mt v 2ap. Colouration. Carapace dark brown to brown, with black eye-field. Sternum and labium grey. Abdomen grey, with a dorsal transverse white stripe on the narrower abdominal part (fig. 18). Legs I as in fig. 12. Leg II yellow, all segments with prolateral black lines. Legs III and IV yellow, with pro- and retrolateral black lines (fig. 13). Palpal structure as in figs 16, 17.
FEMALE. Measurements. Carapace 1.62-1.75 long, 0.87-0.92 wide, 0.50-0.55 high at PLE. Ocular area 0.87 long, 0.80 wide anteriorly and 0.75 wide posteriorly. Diameter of AME 0.22-0.25. Abdomen 1.75-2.75 long, 1.13-1.40 wide. Cheliceral length 0.25-0.35. Length of leg segments: leg I: 0.80 + 0.50 + 0.62 + 0.50 + 0.38; leg II: 0.75 + 0.38 + 0.62 + 0.50 + 0.38; leg III: 0.62-0.75 +

0.35 +0.55 + 0.50 + 0.38; leg IV: 1.00 + 0.50 + 1.00 + 0.69 + 0.40. Leg spination: Leg I: Fm d 1-1; Tb v 1-1-2; Mt v 2-2ap. Leg II: Fm d 1-1; Tb v 0-1, Mt v 0-1-2ap. Leg III: Fm d 1-1. Leg IV: Fm d 1-1. Colouration. Carapace dark yellow, with brown eye field. Palps yellow to light yellow. Sternum brown. maxillae and labium light brown with yellow tips. Abdomen dorsally grey to brownish, with a pair of light transverse stripes behind the anterior scuta. Legs yellow with prolateral and retrolateral longitudinal brown lines. Epigyne and spermathecae as in figs 19-20.

Synageles ramitus ANDREEVA, 1976
(figs 9-11, 23-35)

Synageles ramitus ANDREEVA, 1976: 81, ff. 84-85 (female, holotype from the IZW, not examined).
S. r.: ANDREEVA, 1975: 17 (nomen nudum); PRÓSZYŃSKI, 1976: m. 208; Ibid., 1982: 290, ff. 46-47; OVTSHARENKO & FET, 1980: 444; NENILIN, 1984a: 31; Ibid., 1985: 131; ZYZIN & TARABAEV, 1993: 400; MIKHAILOV & FET, 1994: 518. *S. charitonovi*: PRÓSZYŃSKI, 1979: 318, ff. 290; ZHOU & SONG, 1988: 11, f.13; HU &



Figs 23-34 – *Synageles ramitus* ANDREEVA, 1976. 23, 27, 28 - male palp, ventral view; 24 - ditto, lateral view; 25, 26 - tibial apophysis, dorso-lateral view; 29-31 - epigynes; 32-34 -spermathecae. Scales: 0.1 mm. Specimens: 23-25 - Tajikistan, Vakhsh River Valley; 26, 28, 29, 34 - Tuva, Tere-Khol' Lake; 27, 31 - Turkmenistan, Badhyz; 30, 32, 33 - Uzbekistan, Bukhara.

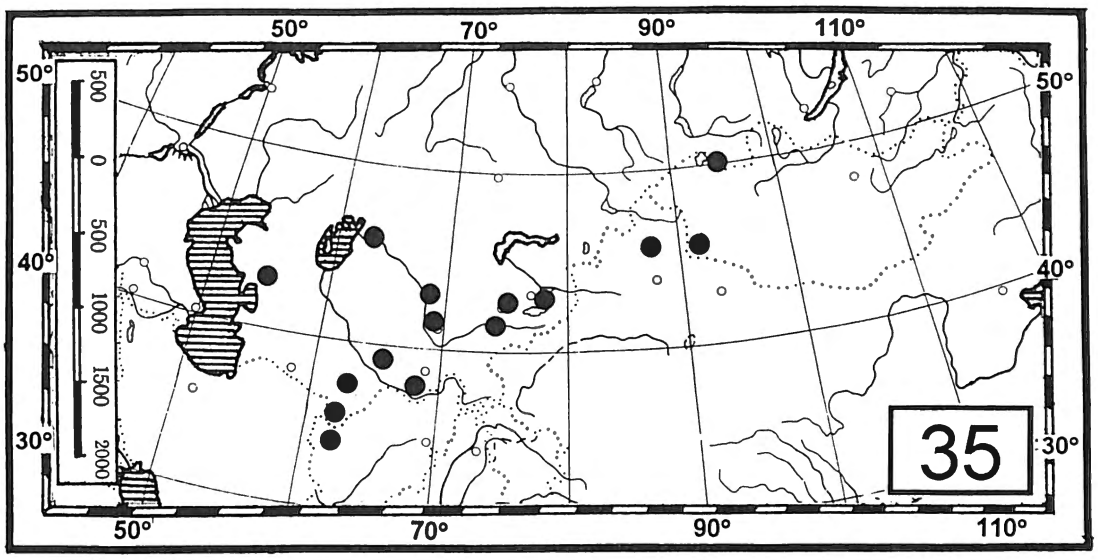


Fig. 35 – Distribution of *Synageles ramitus* ANDREEVA, 1976.

WU, 1989: 394-395, ff. 286.3-6; MIKHAILOV & FET, 1994: 518.

Material examined:
KAZAKHSTAN: 1 female (RINS), Kzyl-Orda Area, Kazalinsk Distr., Lake near Novokazaklinsk, 21.06.1989, A.A. Zyuzin; 1 female (ISE), S-Kazakhstan Area, Turkestan Distr., Karatau Mt. Range, Bayalardyr River valley, 11.06.1989, A.A. Zyuzin; 1 female (ZMMU), Ustyurt Plateau, Ustyurtskiy reservation, ~5 km E of Saksorkuyu, 17.05.1989, A.A. Zyuzin. - UZBEKISTAN: 1 female (RINS), Bukhara Area, ~7.5 S of Alat Vill., 24.04.1993, S.V. Ovtchinnikov. - KYRGHYZSTAN: 1 female (ISE), Toktogulskoye Reservoir, 3.06.1995, S.V. Ovtchinnikov; 1 female (ZMMU), Kungei-Alatau Mt. Range, Tchon-Urjukty, 25.08.1990, S.V. Ovtchinnikov; 1 male (RINS), Kirghiz-Ata Canyon, Karagoi locality, ~2600 m elev., 11.06.1985, S.L. Zonstein; 1 female (ISE), Bishkek env., 5.07.1983, S.V. Ovtchinnikov. - TURKMENISTAN: 4 male, 1 female (ZISP), Badkhyz, Kepelja locality, 27.04-1.05.1977, V.Y. Fet. - TAJIKISTAN: 1 female (IZW, paratype (?) of *Synageles charitonovi*), Beshkentskaya Dolina, Chiluchor-Chashma spring, 20-23.06.1967, E.M. Andreeva; 1 male (IZW), Vakhsh River Valley, confluence with Tekharv River, 2.06.1970, A.M. Andreeva. - TUVA: 3 female (TU), Erzin Area, Tere-Khol' Lake, 50°01' N, 95°03' E, ~1150 m elev, 11-12.06.1995, S.Koponen; 1 male, 1 female (ISE), same locality, Eder-Elezin Sands, 12.07.1992, D.V. Logunov. - MONGOLIA: 1 female (HNHM, No. 865), Exp. Kaszab; 1 female (HNHM, No. 636), Chovd Aimak, Mongol Altai Gebitge, Uljasutajn gol, 45 km NNO von Somon Bulgan, ~1400 m, 6.07.1966, Exp. Kaszab.

Diagnosis:
See comments under Diagnosis of *S. charitonovi*.

Distribution:
S. ramitus seems to be restricted to Central Asia only (fig. 35). It was hitherto reported from Afganistan: Herat (PRÓSZYŃSKI, 1982); Turkmenistan: Badhyz and Murgab (PRÓSZYŃSKI, 1979: as *S. charitonovi*; OVTSHARENKO & FET, 1980; MIKHAILOV & FET, 1994; NENILIN, 1984a); Kazakhstan: E Kyzylkumy Desert (ZYUZIN et al., 1994) and Ustyurt Plateau (ZYUZIN & TARABAEV, 1993); Tajikistan: Ramit (ANDREEVA, 1975; NENILIN, 1984a); Uzbekstan: Tashkent Area, Dal'vezin (NENILIN, 1984a); Mongolia (PRÓSZYŃSKI, 1982) and NW China: Xinijiang (Zhou & Song, 1988; Hu & Wu, 1989: as *S. charitonovi*).

Habitat:
The species occurs in different arid landscapes, e.g. *Caragana-Poaceae* dry steppe (pitfall traps and sweeping) in Tuva (original data); pistache-woodlands (OVTSHARENKO & FET, 1980) or cotton fields (PRÓSZYŃSKI, 1979: as *S. charitonovi*) in Turkmenistan; sandy deserts in Tajikistan (ANDREEVA, 1976); and *Tamarix* riverside thicket (sweeping) in Afganistan (PRÓSZYŃSKI, 1982).

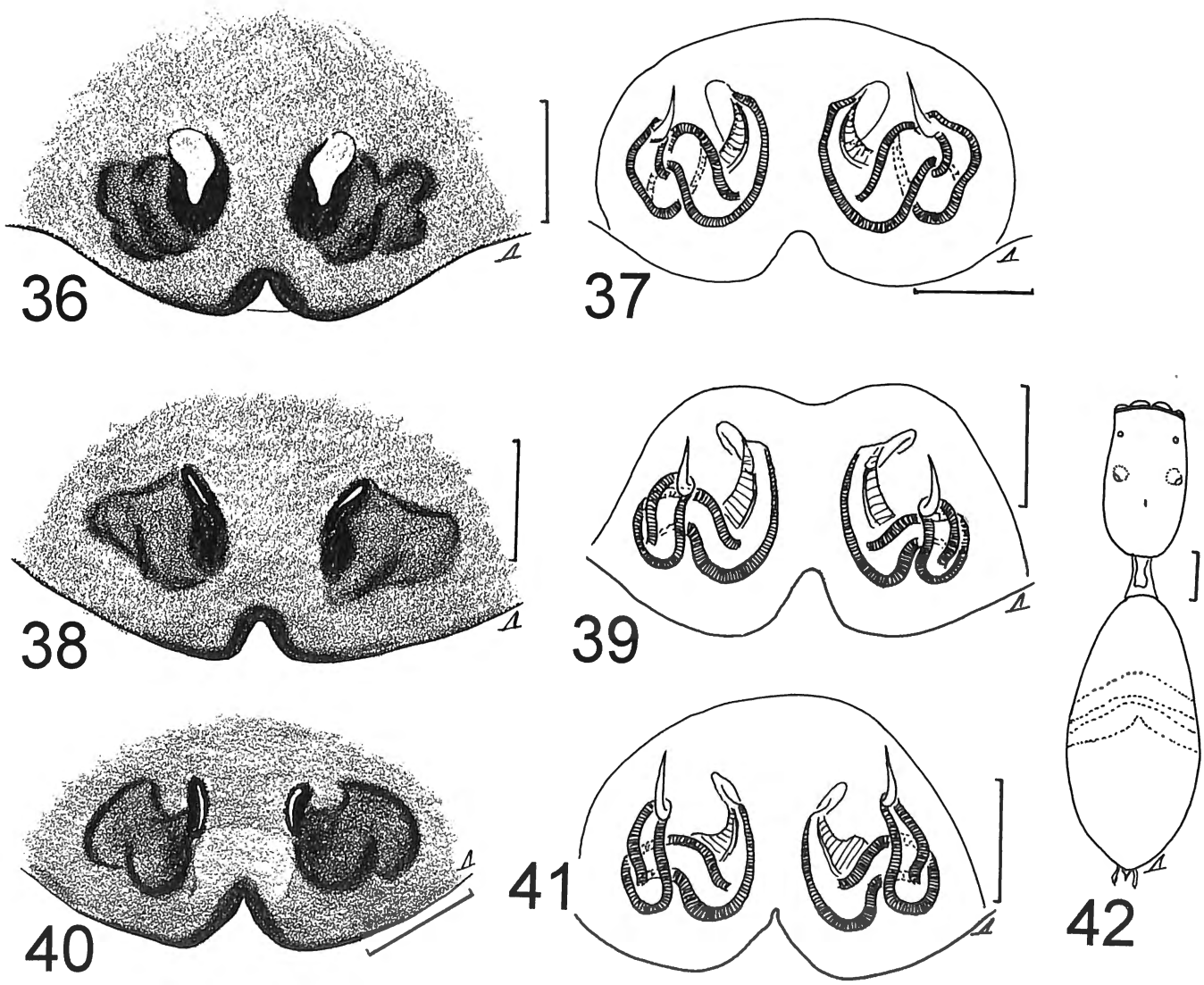
Note:
We were unable to find and restudy the holotype of *S. ramitus* [1 female from Ramit, Tajikistan (see ANDREEVA, 1976: 81)] in ANDREEVA's spider collection deposited in the IZW. So, our notions about what actually is *S. ramitus* are based on the ANDREEVA's figures and description (Op. cit.: 81, figs 84-85), as well as studying specimens from nearest to the type-locality areas in Tajikistan (Vakhsh River Valley).
The only available male from Tuva (S-Siberia) differs a little in the structure of embolus (fig. 28), tibial apohysis (fig. 26), the shape of the tegulum (fig. 28) and colouration of the first leg (fig. 10) from males collected in Middle Asia (cf. figs. 9, 25, 27). However, it seems to

be similar to the male reported by ZHOU & SONG (1988: fig. 13, e,f) from Xinijang, China. Currently, it is impossible to decide if the Tuvan-Mongolian-Xinijang specimens belong to a separate species, since comparison of females from different regions of Central Asia showed a strong variability in the structure of the genitalia (figs 29-34). So, we assume that the differences in male palps reported above reflect variability as well.

Description:

MALE. Carapace 1.50 long, 0.93 wide, 0.50 high at PLE. Ocular area 0.82 long, 0.75 wide anteriorly and 0.75 wide posteriorly. Diameter of AME 0.25. Abdomen 1.74 long, 0.98 wide. Cheliceral length 0.25. Length of leg segments: leg I: 1.00 + 0.67 + 0.75 + 0.50 + 0.36; leg II: 0.75 + 0.36 + 0.50 + 0.42 + 0.30; leg III: 0.47 + 0.25 + 0.40 + 0.33 + 0.25; leg IV: 0.75 + 0.38 + 0.62 + 0.42 + 0.25. Leg spination. Leg I: Fm d 0-1 pr 1ap; Tb v 1-1; Mt v 2-2ap. Leg II: Fm d 1-1; Mt v 1-2ap. Leg III: Fm d 1-1; Mt v 2ap. Leg IV: Fm d 1-1; Tb v 0-1-0; Mt v 2ap. Colouration. Carapace dark brown, with lighter eye field. Sternum brown. Dorsum with both basal and apical scutae separated by a light transverse stripe like in all *Synageles*. Leg I as in figs 9,10. Remaining legs yellow with dark longtudinal lines (fig. 11), metatarsi and tarsi II darker, almost black. Palpal structure as in figs 23-28.

FEMALE. Carapace 1.50 long, 0.82 wide, 0.50 high at PLE. Ocular area 0.82 long, 0.75 wide anteriorly and 0.75 wide posteriorly. Diameter of AME 0.25. Abdomen 2.25 long, 1.43 wide. Cheliceral length 0.25. Length of leg segments. Leg I: 0.70 + 0.35 + 0.50 + 0.33 + 0.30; leg II: 0.62 + 0.36 + 0.50 + 0.36 + 0.30; leg III: 0.62 + 0.26 + 0.50 + 0.40 + 0.36; leg IV: 0.82 + 0.35 + 0.54 + 0.58 + 0.36. Leg spination: Leg I: Fm d 1-1; Tb v 1-1; Mt v 2-2ap Leg II: Fm d 1-1; Mt v 1-2ap Leg III: Fm d 1-1. Leg IV: Fm d 1-1; Mt v 1ap Colouration as described for male, but sternum a little lighter. Dorsum with an anterior scutum only. Epigyne and spermathecae as in figs 29-34.



Figs 36-42 – *Synageles venator* (LUCAS, 1836). 36, 38, 40 - Epigynes; 37, 39, 41 - spermathecae; 42 - general appearance of female. Scales: 36-41 - 0.1 mm; 42 - 0.5 mm. Specimens: 36, 37 - Pavlodar Area, Maliy Kalkaman Lake; 38, 39 - Novosibirsk Area; 40-42 - Uzbekistan, Alat.

Synageles venator (LUCAS, 1836)
(figs 22, 36-42)

S. v.: PRÓSZYŃSKI, 1976: m. 204; NENILIN, 1985: 131; ZHOU & SONG, 1988: 11, f. 14; HU & WU, 1989: 395, ff. 286.7-8; SAVELJEVA, 1990: 173; HEIMER & NENTWIG, 1991: 522, f. 1396.

Material examined:
UZBEKISTAN: 1 female (ISE), Bukhara Area, ~28 km S of Alat, 24.04.1993, D.V. Logunov. - KAZHAKHSTAN: 1 female (ISE), Pavlodar Area, Malyi Kalkaman Lake (W of Pavlodar), 6.06.1994, O.V. Lyakhov; 1 male (RINS), ~20 km S of Pavlodar, Irtysh River Valley, 15-17.05.1992, O.V. Lyakhov. - NOVOSIBIRSK AREA: 1 female (RINS), Kolyvan', 25.07.1987, D.V. Logunov. - KRASNOYARSK PROVINCE: 1 male (ISE), Ermakovo Distr., Tanzybei env., 53°08'N, 92°53'E, 20.07.1988, D.L. Grodnitskiy; 6 female (ISE), same locality, 2-3.06.1995, Y.M. Marusik.

Comparative material:
KOSTROMA AREA: 1 male, 1 female (ZMMU), Manturovskiy Distr., Davydovo, 25.08.1982, E. Veselova. - MOSCOW AREA: 1 female (ZMMU), Odintsovo Distr., Zhavoronki, 14-15.07.1982, K.G. Mikhailov.

Comments:
This trans-Eurasian species showed a restricted distribution in Central Asia, its southernmost locality, currently known, being from Uzbekistan, Bukhara (fig. 22). However, *S. venator* is rather common in the neighbouring Central Asian areas of S-Siberia (fig. 22).
While comparing females of *S. venator* from different regions, we have found a female (Pavlodar Area, Maliy Kalkaman Lake) that differs in the structure of the epigynes and the spermathecae (cf. figs 36, 37 and 38-41). ZHOU & SONG (1988) seem to report on a similar female collected from Xinijang, China. Since there is the only female at our disposal, we are unable to ascertain its taxonomic status and hence consider it as *S. venator*. Males are necessary to resolve this problem.

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