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# Miscellaneous notes on Middle Asian jumping spiders (Aranei: Salticidae)

# Смешанные заметки о среднеазиатских пауках-скакунчиках (Aranei: Salticidae)

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KEY WORDS: jumping spiders, Middle Asia, new species, faunistics.

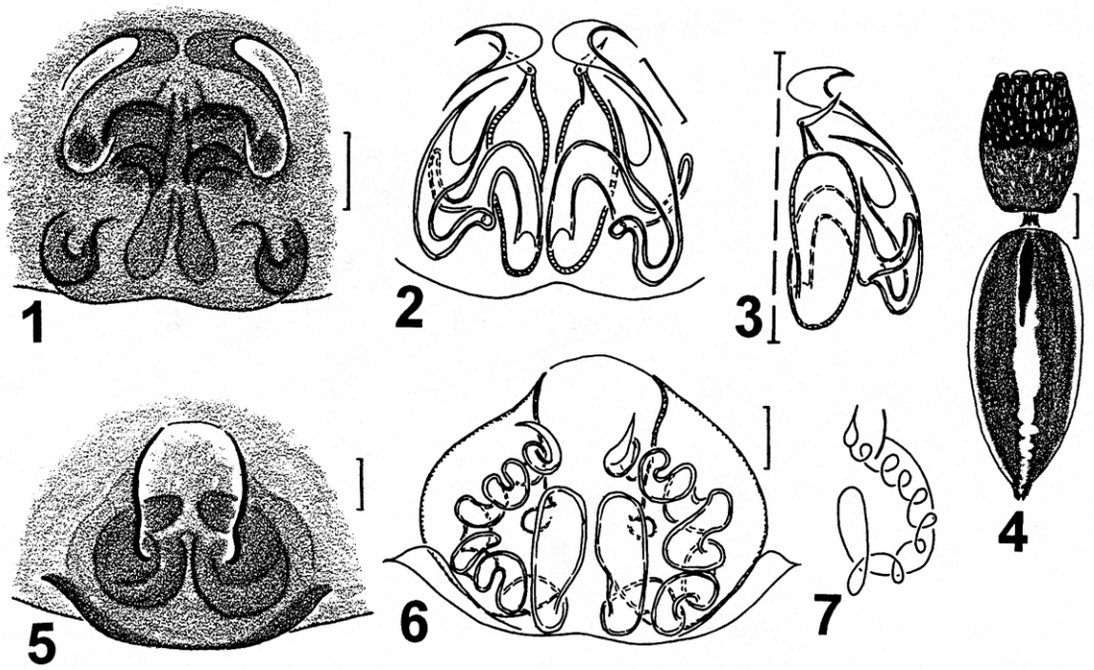
КЛЮЧЕВЫЕ СЛОВА: пауки-скакунчики, Средняя Азия, новые виды, фаунистика.

ABSTRACT: Taxonomic and faunistic notes are presented on 54 Middle Asian salticid species. The lectotype for *Langona tartarica* (Charitonov, 1946) is designated. Two new synonyms are proposed: *Marpissa obscura* Kroneberg, 1875 under *M. canestrinii* Ninni, 1868; and *Pellenes tesin* Logunov, 1995 under *P. dilutus* Logunov, 1995. Three species, *Icius flavipes* Caporiacco, 1935, *Phlegra bresnieri* (Lucas, 1846) and *Pseudicius afghanicus* (Andreeva, Hęciak & Prószyński, 1984), are recorded in Middle Asia for the first time. Eight new species are described: *Langona pallidula* sp.n. (Turkmenistan), *Macaroeris asiaticus* sp.n. (SE-Kazakhstan and Kyrghyzstan), *Plexippoides arkit* sp.n. (Kyrghyzstan), *Proszynskiana aeluriforma* sp.n. (S-Uzbekistan), *Salticus aiderensis* sp.n. (SW-Turkmenistan), *S. turkmenicus* sp.n. (C-Turkmenistan), *Sittius barsakelmes* sp.n. (NW-Kazakhstan) and *S. dubatolovi* sp.n. (SE-Kazakhstan). Five species, *Ballus chalybeus seguipes* (Simon, 1868), *B. rufipes* (Simon, 1868), *Plexippus setipes* (Karsch, 1879), *Sitticus distinguendus* (Simon, 1868) and *S. rupicola* (C.L. Koch, 1837), are excluded from the salticid fauna of Middle Asia. Maps showing the distribution of all studied species in Middle Asia (and in the the Caucasus) are provided as well.

РЕЗЮМЕ. Представлены таксономические и фаунистические заметки о 54 среднеазиатских видах сальтицид. Выделен лектотип для *Langona tartarica* (Charitonov, 1946). Предложены два новых синонима: *Marpissa obscura* Kroneberg, 1875 с *M. canestrinii* Ninni, 1868; и *Pellenes tesin* Logunov, 1995 с *P. dilutus* Logunov, 1995. Три вида, *Icius flavipes* Caporiacco, 1935, *Phlegra bresnieri* (Lucas, 1846) и *Pseudicius afghanicus* (Andreeva, Hęciak & Prószyński, 1984), отмечены для Средней Азии впервые. Описано восемь новых видов: *Langona pallidula* sp.n. (Туркменистан), *Macaroeris asiaticus* sp.n. (ЮВ-Казахстан и Киргизстан), *Plexippoides arkit* sp.n. (Киргизстан), *Proszynskiana aeluriforma* sp.n. (Ю-Узбекистан), *Salticus aiderensis* sp.n. (ЮЗ-Туркменистан), *S. turkmenicus* sp.n. (Ц-Туркменистан), *Sittius barsakelmes* sp.n. (СЗ-Казахстан) и *S. dubatolovi* sp.n. (ЮВ-Казахстан). Пять видов, *Ballus chalybeus seguipes* (Simon, 1868), *B. rufipes* (Simon, 1868), *Plexippus setipes* (Karsch, 1879), *Sitticus distinguendus* (Simon, 1868) и *S. rupicola* (C.L. Koch, 1837) выведены из состава фауны сальтицид Средней Азии. Приводятся также карты распространения всех изученных видов в Средней Азии (и на Кавказе).

## Introduction

Though the Salticidae of Middle Asia has been the subject of considerable interest in recent years [Logunov, 1992a, b, 1993a, b, 1995, 1996; Logunov & Wesołowska, 1993, 1995; Wesołowska, 1996; etc.], our knowledge of their distributions within the region are rather scanty. Of about 250 salticid species found currently in Middle Asia [Logunov, pers. data], some have been known so far from single/few specimens, often from holotypes only, and from a few localities. The present study deals with miscellaneous taxonomic and faunistic data on 54 Middle Asian species of Salticidae, of which most are either poorly-known or recently described. Eight species are described as new to science. In some cases,




Figs 1–7. ♀ genitalia and body colouration of *Icius flavipes* (♀ from Repetek) (1–4) and *Plexippoides arkit* sp.n. (holotype) (5–7): 1, 5 — epigyne; 2, 3, 6 — spermathecae; 4 — body colouration; 7 — diagrammatic course of insemination ducts. Scales: 0.1 mm (1–3, 5, 6) and 1 mm (4).

Рис. 1–7. Гениталии самок и окраска тела *Icius flavipes* (♀ из Репетека) (1–4) и *Plexippoides arkit* sp.n. (holotype) (5–7): 1, 5 — эпигина; 2, 3, 6 — сперматека; 4 — окраска тела; 7 — схематический ход семеприемников. Масштаб: 0,1 мм (1–3, 5, 6) и 1 мм (4).

additional material from the Caucasus has been used to refine the distribution of the species.

## Material and methods

The work is based on museum collections and newly collected material from Middle Asia and the Caucasus. Specimens for this study were borrowed from or housed in the following museums:

AVG — personal collection of A.V. Gromov, Almaty, Kazakhstan;

ISEA — Zoological Museum of the Institute for Systematics and Ecology of Animals, Russian Academy of Sciences, Novosibirsk, Russia;

IZW — Institute of Zoology, Warsaw, Poland;

MNHN — Muséum National d'Histoire Naturelle, Paris, France;

PSU — Department of Invertebrate Zoology, Perm State University, Perm, Russia;

SVO — personal collection of S.V. Ovtchinnikov, Bishkek, Kyrghyzstan;

ZISP — Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia;

ZMHU — Zoological Museum of the University of Helsinki, Helsinki, Finland;

ZMMU — Zoological Museum of the Moscow State University, Moscow, Russia.

In most cases the names of collectors are abbreviated as follows: Dr. V.V. Dubatolov (V.D.), Dr. P.M. Dunin (P.D.), Mr. A.A. Feodorov (A.F.), Dr. S.I. Golovatch (S.G.); Mr. A.V. Gromov (A.G.), Dr. A.P. Kononenko (A.P.); Dr. D.V. Logunov (D.L.), Mr. O.V. Lyakhov (O.L.), Dr. Yu.M. Marusik (Y.M.); Dr. K.G. Mikhailov (K.M.), Mr. D.A. Milko (D.M.); Mr. A.B. Nenilin (A.N.); Dr. V.I. Ovtsharenko (V.O.); Mr. S.V. Ovtchinnikov (S.O.), Dr. T.N. Pavlenko (T.P.); Dr. V.I. Sytchevskaya (V.S.); Dr. S.L. Zonstein (S.Z.), Dr. A.A. Zyuzin (A.Z.).

Abbreviations used in the figures and in the text: ap. — apically; d. — dorsally; Fm — femur; Mt — metatarsus; pr. — prolateraly; Pt — patella; rt. — retrolaterally; Tb — tibia; v. — ventrally. For the leg spination the system adopted is that used by Ono [1988]. The sequence of leg segments in measurement data is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are in mm.

## Survey of species

*Ballus* C.L. Koch, 1851

*Ballus chalybeius* (Walckenaer, 1802)
Figs 15–17, Map 6.

Material. KYRGHYZSTAN: 2 ♂♂ (ZMMU), Fergansky Mt. Range, Charvak, 12.08.1981, S.Z.; 1 ♂ (ISEA), Dzhalalabad Area, Sary-Chelek Reserve, Arkit, 17.06.1992, A.Z. — TAJIKISTAN: 1 ♀ (ISEA), Hissar Mt. Range, Ramit Reserve, 2–7.05.1986, S.Z. —

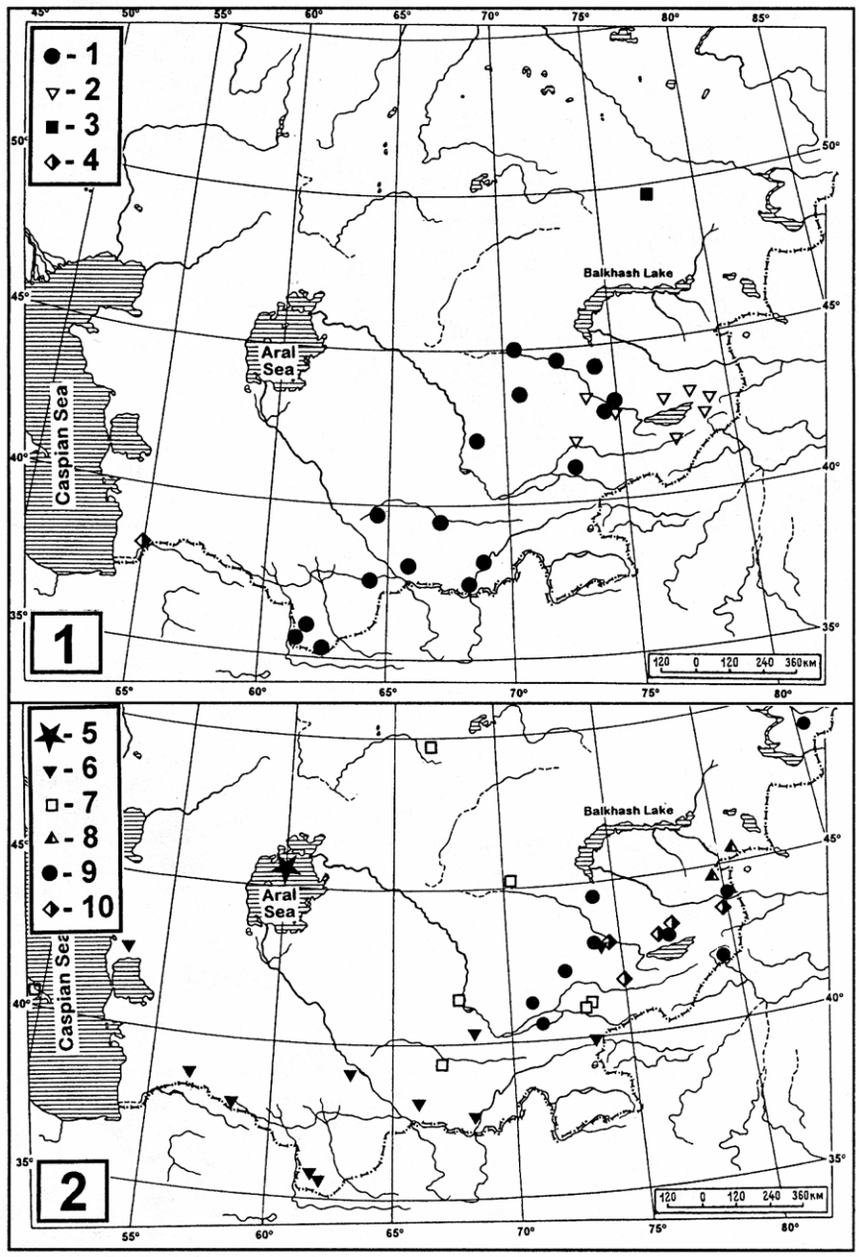
TURKMENISTAN: 1♂ (ZMMU), SW-Kopetdagh, Aidere, 800 m a.s.l., 25.04.1989, K.M.; 2♂♂, 1♀ (ISEA), same locality, Eldere, 5.06. 1982, B.P. Zakharov.

Comparative material. Caucasus. RUSSIA: 1♀ (ZISP), Krasnodar Prov., Maikop, 8.06.1976, V.O.; 1♂ (ISEA), Daghestan, Makhachkala, 7.06.1982, S.G. — ARMENIA: 1♀ (ZMMU), Kafan Distr., Shikahoh Reserve, 30.06. 1983, S.G.; 2♂♂ (ZMMU), ca 4 km NNW of Megri, Legvaz, ~1000 m a.s.l., 24–25.04.1983, S.G. — AZERBAIJAN: 1♂ (ISEA), Khudat, 10.05.1978, P.D.; 1♂ (ISEA), ca 60 km SW of Baky, Gobustan, 7.05.1989, P.D.; 1♀ (ISEA), Lenkoran Distr., Bilyasary, ~200 m a.s.l., 20.05.1986, H. Aliev; 1♂ (ISEA), 25–30 km NE of Shemakha, Pirkuli Reserve, 1200-1300 m a.s.l., 26.05.1984, D.L. — GEORGIA: 1♂ (ZISP), Lagodekhi Reserve, 21.06.1982, Y.M. — UNCERTAIN LOCALITY: 3♂♂ (ZMHU), "the Caucasus, 1863, Bayern".

DISTRIBUTION. This is a Euro-Middle Asian subboreal species. In Middle Asia, it has repeatedly been reported from Uzbekistan: Yakkabag and Kuramisky Mt. Range (Kamchik) [Kharitonov, 1969: sub *B. depressus*; Nenilin, 1984a]; Kyrghyzstan: Arslanbob [Zonstein, 1984: sub *B. depressus*]; Kazakhstan: Ustyurt Plateau [Zyuzin & Tarabaev, 1994: sub *B. depressus*]; and Tajikistan: Varzob and Hissar Valley (Khotchil'er) [Andreeva, 1976]. All localities of *B. chalybeius* in the Caucasus and Middle Asia are shown in Map 6.

Most probably, the records of *B. chalybeus sequipes* in Tajikistan (Khazratisho) [Andreeva, 1975, 1976] and of *B. rufipes* in Uzbekistan (Samarkand), Kazakhstan (Zailisky Alatau Mt. Range) and Turkmenistan (SW-Kopetdagh) [Kroneberg, 1875; Folkina, 1978; Nenilin, 1984a] actually belong to *B. chalybeius*. As proved by Alicata & Cantarella [1987: sub *B. depressus*], at least *B. chalybeus sequipes* has to be considered as a junior synonym of *B. chalybeius*. According to the same authors [Alicata & Cantarella, 1987], *B. rufipes* and *B. chalybeius* can be reliably distinguished by the spermathecal structure only, while Kroneberg [1875: 17], who first reported *B. rufipes* from Middle Asia, dealt with a single male.

COMMENTS. Colouration in male *B. chalybeius* has been found to vary rather strongly (Figs 15–17), forming no definitive colour pattern characteristic of the species in a manner done by Alicata & Cantarella [1987: sub *B. depressus*]. All studied females, both from Middle Asia and the Caucasus, do belong to the same species, *B. chalybeius*. Hence, despite the pronounced colour variability in males and taking into account that females of *Ballus* are much more important for species determination, we believe all Middle Asian material belongs to a single species, *B. chalybeius*. The occurrence of *B. rufipes* in Middle Asia ought to be reconfirmed upon pertinent, mainly female, material.




Maps 1–2. Localities of *Dendryphantes tuvinensis* (3), *Leptorchestes* sp. (4), *Marpissa canestrinii* (7), *Plexippoides flavescens* (6), *Rafalus variegatus* (1), *Sitticus barsakelmes* sp.n. (5), *S. dubatolovi* sp.n. (8), *S. inopinabilis* (10), *S. mirandus* (9) and *S. talgarensis* (2) in Middle Asia.

Карты 1–2. Местонахождения *Dendryphantes tuvinensis* (3), *Leptorchestes* sp. (4), *Marpissa canestrinii* (7), *Plexippoides flavescens* (6), *Rafalus variegatus* (1), *Sitticus barsakelmes* sp.n. (5), *S. dubatolovi* sp.n. (8), *S. inopinabilis* (10), *S. mirandus* (9) и *S. talgarensis* (2) в Средней Азии.

## *Cyrba* Simon, 1876

### *Cyrba algerina* (Lucas, 1846)
Map 7.

Material. TURKMENISTAN: 3♂♂, 3♀♀ (ZISP), Surkhadarya Area, Kuhitangtau Mt. Range, Kampyr-Tepa, 19.05.1982, A. Nenilin; 1 ♀ (ISEA), Ashghabad, 6.04.1993, D.L. & S.Z.; 2 ♂♂, 1 ♀ (ZMMU), SW-Kopetdagh, Aidere, ~800 m a.s.l., 25–26.04. 1988, K.M.; 1 ♂, 1 ♀ (ZISP), same locality, Ipai-Kala, 20–23.05. 1984, V. Fet; 1♀ (ZMMU), same locality, ca 10 km W checkpoint on road between Kizil-Arvat and Kara-Kala, 10.05.1988, I.V. Muratov; 1 ♀ (ZISP), near Kara-Kala, ~400 m a.s.l., Parkhai, 20–21.04.1985, S.Z. — UZBEKISTAN: 1♂ (SVO), Zeravshansky Mt. Range, 7–9 km N of Kitab, Pass Aman-Kutan, 27.04.1993, S.O.; 1 ♀ (AVG), 2 km W of Yangikishlak, 15.05.1994, A.G.

Comparative material. RUSSIA: 3 ♂♂, 1 ♀ (ISEA), Daghestan, Derbent, 20.05.1989, P.D. — AZERBAIJAN: 3 ♀♀ (ISEA), Apsheron Peninsula, Baku, 29.06.1976, P.D.; 1 ♀ (ISEA), same locality, 31.05.1989, P.D.; 1♂ (ZMMU), same locality, 25.04.1989, P.D.; 1 ♀ (ISEA), Lerik Distr., Mistan, 24.07.1983, P.D.; 3 ♂♂, 1 ♀ (ISEA), Zarat, Mt. Beshbarmak, 18.05.1978, P.D.

DISTRIBUTION. The species is known from the Mediterranean region, including the Canary Islands and N-Africa, up to India and Middle Asia in the east [Wanless, 1984], where it has hitherto been recorded in Turkmenistan: Ashghabad, SW-Kopetdagh [Fet, 1983, 1985b; Nenilin, 1984a; Mikhailov & Fet, 1994; Wesołowska, 1996]; Tajikistan: Varzob Valley, Ordzhonikidzebad, Ramit and Kondara Canyon [Andreeva, 1975, 1976; Kharitonov, 1951; Nenilin, 1984a]; and Uzbekistan: Sairob [Andreeva, 1975, 1976; Nenilin, 1984a], Shakhrisyabz, Ishkent, Pass Aman-Kutan [Kharitonov, 1969; Nenilin, 1984a] and Samarkand [Kroneberg, 1875; Kharitonov, 1932]. Most of the localities of *Cyrba algerina* in the Caucasus and Middle Asia are shown in Map 7.

### *Cyrba ocellata* (Kroneberg, 1875)
Map 7.

Material. UZBEKISTAN: 5♀♀ (ZMMU, syntypes of *Euophrys ocellata*), Samarkand, coll. Fedtschenko; 1♀ (ZISP), same locality, 2-16.05.1980, V.A. Aleshin; 1 ♂ (SVO), Bukhara Area, ca 7.5 km S of Alat, 24.04.1993, S.O.; 1 ♂ (SVO), same area, 20 km S of Kagan, 19.05.1994, S.O.; 2 ♂♂, 1 ♀ (SVO), Babatagh Mt. Range, Ak-Mechet, 28.04.1995, S.O.; 13 ♂♂, 3 ♀♀ (SVO), same locality, 23.04.1994, S.O.; 1♀ (AVG), same locality, 18.04–6.05.1994, A.G.; 1 ♀ (AVG), Surkhandarya Area, 2 km W of Derbent, 15.05.1994, A.G.; 1 ♂, 1 ♀ (ISEA), 33 km SE of Bukhara, Dzheirany Pitomnik, 19.05.1994, A.Z. — KAZAKHSTAN: 1 ♂ (ZISP, det. as *C. tadzika*), Barsakelmes Island in Aral Sea, date ?, T.V. Pavlenko; 1 ♂ (ISEA), Mangyshlak (= Guriev) Area, Kuibyshevo, 20.05.1985, S.I. Deryughin; 1 ♂, 2 ♀♀ (ISEA), same area, Mt. Novyi Uzen', Ustyurt Reserve, 12–19.05.1989, A.Z.; 3♀♀ (ISEA), same locality, Kurgusem and Elghibek, 23–24.05.1989, A.A. Raikhanov & S.I. Ibraev; 9 ♂♂, 8 ♀♀ (ISEA), same locality, Kenderli, 20.05.1989, A.Z.; 1 ♀ (ISEA), S-Kazakhstan (= Chimkent) Area, ca 102 km NW of Bairkum, Oasis Dyusebai, 27–28.05.1993, A.Z. — KYRGHYZSTAN: 2 ♀♀ (ISEA), Dzhalal-Abad Area, Dzhany-Dzhal Distr., 5 km SW Kyzyl-Dzhar, 22.06.1992, A.F. & A.Z.; 5 ♂♂, 9 ♀♀ (ISEA), same area and distr., Tash-Kumyr, 15.06.1992, A.F. & A.Z. — TAJIKISTAN: 1 ♂ (ZISP), Dushanbe, 12.07.1991, S.O.; 1 ♀ (ISEA), Gandzhina, 13-15.04.1986, S.Z.; 1 ♀ (ISEA), Kurgan-Tyube Area, Dzhylikul Distr., Garavuti, 22.04.1986, A.Z. — TURKMENISTAN: 1 ♂ (ISEA), Karakum Desert, Repetek Reserve, 23.04.1993, D.L.; 2 ♂♂, 3 ♀♀ (ZMMU), same locality, 12–31.05.1982, V.A. Krivokhatsky; 2♀♀ (ZMMU), Krasnovodsk, 19.01.1982, K.M.; 1 ♂ (ISEA), same locality, 15.05.1992, Krendelev; 1 ♂ (ZMMU), SW-Kopetdagh, Kara-Kala, Kara-Elchi Mt. Range, 3–5.05.1988, I.V. Muratov; 2 ♂♂, 2 ♀♀ (ZMMU), same locality, Kara-Kala, 4.05.1987, A.Z.; 1 ♂ (ZISP), same locality, Parkhai, ~400 m a.s.l., 20–21.04.1985, S.Z.; 1 ♀ (ZMMU), ca 15 km N of Kara-Kala, 1.05.1988, I.V. Muratov; 1 ♂ (ZMMU), Badhkyz, Er-oylan-duz, 17.04.1984, V.V. Yanushev; 2♂♂ (ISEA), ca 40 km SE of Pulikhatum, Zulfagarsky Mt. Range, ~1000 m a.s.l., 13–14.04.1993, D.L.; 1 ♂, 1 ♀ (ISEA), 20-25 km SE of Pulikhatum, Ghezghyadyk Mt. Range, ~1000 m a.s.l., 15–16.04.1993, D.L., 1♂, 1♀ (ISEA), Bayram-Ali, 30.10.1982, coll. ?; 1♂ (ISEA), ca 12 km NE of Nebit-Dag, foothills of Bolshoi Balkhan Mt. Range, 1.04.1993, A.Z.; 1♂ (ISEA), 10–18 km N of Guzhghy (= Kushka), ca 9 km N of Chemen-Ibid, 18.04.1993, D.M.; 2 ♂♂, 2 ♀♀ (ZMMU), Kuhitangtau Mt. Range, Chodzhafil, ~1000 m a.s.l., 10.05.1984, S.Z.

Comparative material. AZERBAIJAN: 1 ♀ (ZMMU), Kuba Distr., Nyugyady, ~600 m a.s.l., 10.07.1975, P.D.; 1♀ (ISEA), Baku, 23.06.1975, P.D.

DISTRIBUTION. *Cyrba ocellata* is known to be distributed in the Australian and Oriental regions, as well as in Middle Asia [Wanless, 1984], where it has hitherto been recorded in Turkmenistan: Solyukly [Kuznetsov & Fet, 1986], SW- and C-Kopetdagh [Fet, 1983; Mikhailov & Fet, 1994; Wesołowska, 1996], Bolshoi Balkhan Mt. Range, Sakka, Chardzhou Area, Amudaryinsky Reserve, Farab [Wesołowska, 1996] and Repetek [Krivokhatsky, 1983]; Kazakhstan: Barsakelmes Island [Pavlenko, 1985; Zyuzin et al., 1994] and Ustyurt Plateau [Zyuzin & Tarabaev, 1994]; Uzbekistan: Samarkand [Kroneberg, 1875: sub *Euophrys o.*; Nenilin, 1984a]; and Tajikistan: Dushanbe, Beshkentskaya Valley, Tigrovaya Balka, Gandzhina, Ramit [Andreeva, 1975, 1976: sub *C. tadzika*; Nenilin, 1984a]. All localities of *C. algerina* in the Caucasus and Middle Asia are shown in Map 7.

## *Dendryphantes* C.L. Koch, 1837

### *Dendryphantes rudis* (Sundevall, 1832)
Map 10.

Material. KAZAKHSTAN: 2♂♂, 1♀ (ISEA), Pavlodar Area, Bayan-Aul Distr., Kyzyl-Tau, 10–12.06.1991, O.L.

DISTRIBUTION. This trans-Eurasian boreal species has not been found yet south of N- and E-Kazakhstan. Its southernmost localities lie in the Pavlodar Area [current data] (Map 10) and E-Kazakhstan [Savelyeva, 1970, 1990].

### *Dendryphantes tuvinensis* Logunov, 1991
Map 1.

Material. KAZAKHSTAN: 2 ♂♂ (ISEA), Pavlodar Area, Bayan-Aul Distr., Kyzyl-Tau, 10–12.06.1991, O.L.

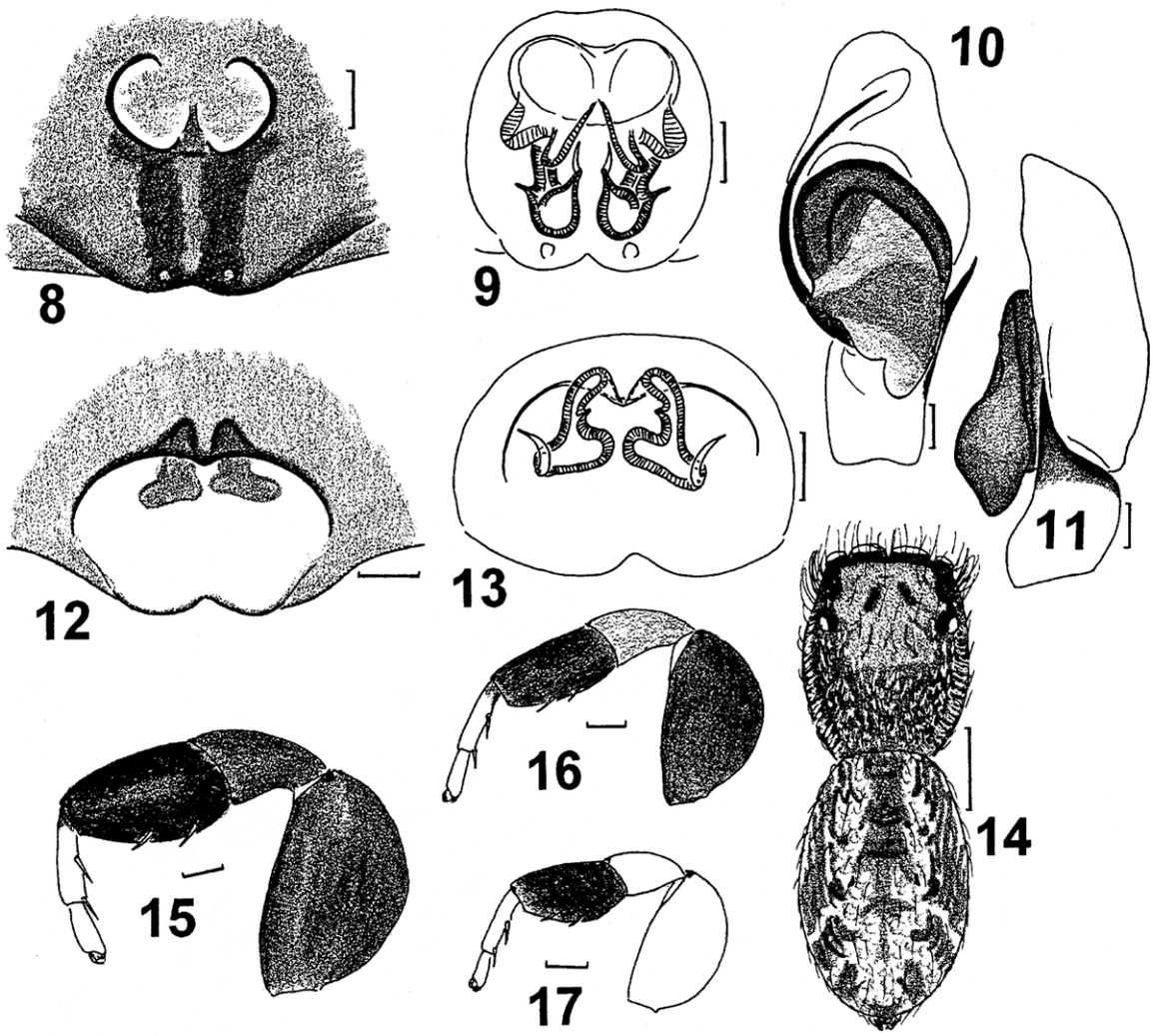
DISTRIBUTION. This species seems to display a N-Kazakhstan — W-Mongolian subboral pattern of distribution. It has not been found yet south of N-Kazakhstan, with the southernmost localities lying in E-Kazakhstan: Zaisan and Saur Mt. ranges [Logunov, 1992b] and the Pavlodar Area [current data] (Map 1).

## *Icius* Simon, 1876

### *Icius flavipes* Caporiacco, 1935
Figs 1–4, Map 6.

Material. TURKMENISTAN: 4 ♀♀ (ISEA), Repetek, 18-19.05.1982, V.A. Krivokhatsky.

DIAGNOSIS. *Icius flavipes* is most close to *Afralacilla asorotica* Wesołowska & Harten, 1994 recently described from Yemen [Wesołowska & Harten, 1994: figs. 11–13],



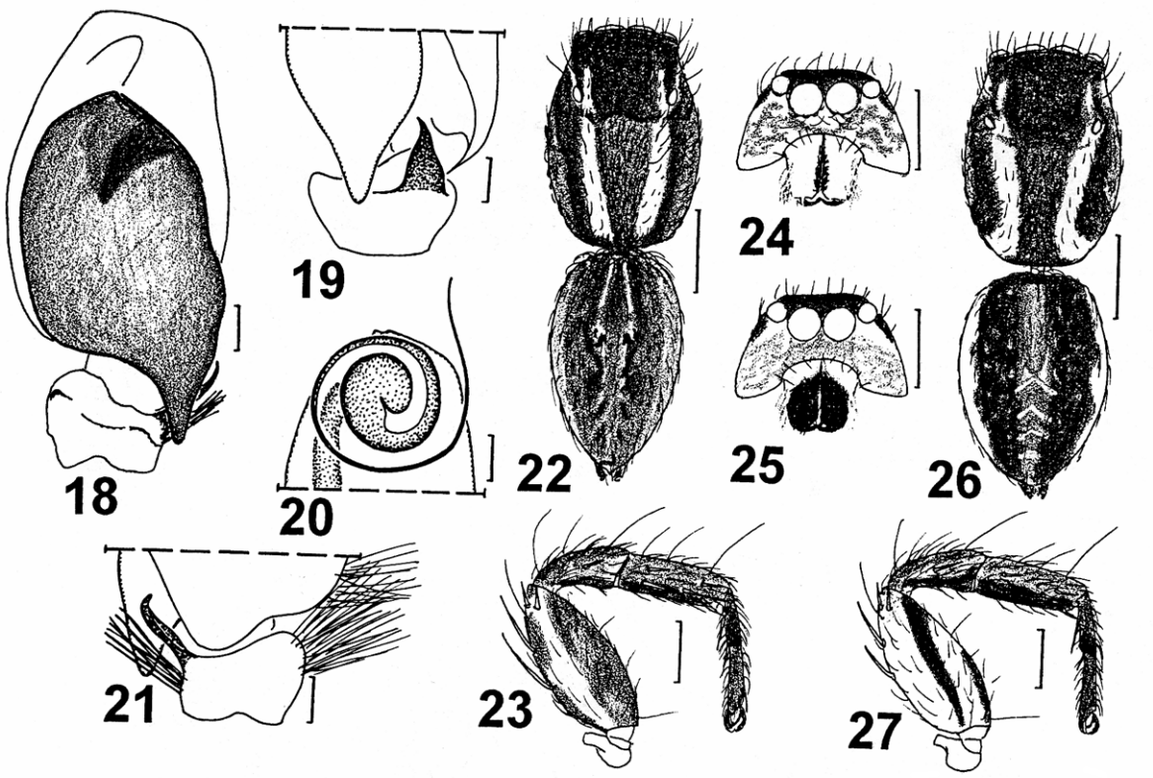

Figs 8–17. Genitalia and somatic characters of *Salticus aiderensis* sp.n. (holotype) (8, 9), *Macaroeris asiaticus* sp.n. (holotype) (12–14), *Ptocasius variegatus* (♂ from near Almaty) (10, 11) and *Ballus depressus* (from Azerbaijan: Gobustan (17), Khudat (16); and Kyrghyzstan: Sary-Chelek (15)) (15–17): 8, 12 — epigyne; 9, 13 — spermathecae; 10, 11 — male palp, ventral and lateral views; 14 — ♀ body colouration; 15–17 — ♂ first leg, colour variation. Scales: 0.1 mm (8–13); 1 mm (14) and 0.25 mm (15–17).

Рис. 8–17. Гениталии и соматические признаки *Salticus aiderensis* sp.n. (holotype) (8, 9), *Macaroeris asiaticus* sp.n. (holotype) (12–14), *Ptocasius variegatus* (♂ из окр. Алма-Аты) (10, 11) и *Ballus depressus* [из Азербайджана: Гобустан (17), Худат (16); и Киргизии: Сары-Челек (15)] (15–17): 8, 12 — эпигина; 9, 13 — сперматека; 10, 11 — пальпа самца, вид вентрально и латерально; 14 — окраска тела самки; 15–17 — первая нога самца, изменчивость окраски. Масштаб: 0,1 мм (8–13); 1 мм (14) и 0,25 mm (15–17).

but it differs in having of the striped dorsum (Fig. 4) and the shorter insemination ducts (Figs 2–3). The epigynes of both species are almost indistinguishable.

DESCRIPTION. FEMALE. Measurements. Carapace 1.63 long, 1.00 wide, 0.55 high at PLE. Ocular area 0.58 long, 0.88 wide anteriorly and 1.00 wide posteriorly. Diameter of AME 0.23. Abdomen 2.75 long, 1.38 wide. Cheliceral length 0.38. Length of leg segments: leg I: 0.63 + 0.38 + 0.50 + 0.25 + 0.35; leg II: 0.56 + 0.38 + 0.36 + 0.25 + 0.33; leg III: 0.50 + 0.28 + 0.38 + 0.38 + 0.38; leg IV: 0.75 + 0.38 + 0.50 + 0.50 + 0.43. Leg spination. Leg I: Fm d.1-1-2; Tb pr.0-1-1; Mt v.2-2ap. Leg II: Fm d.1-1-2; Mt v.0-1-1ap. Leg III: Fm d.1-1-2; Mt 4ap. Leg IV: Fm d.1-1-2; Mt pr.1ap., v.1-2ap. Colouration. Carapace brown, with a median yellow longitudinal stripe and yellow edges; black arround eyes. A row of stridulatory bristles below PME. Entire carapace covered with white scales. Clypeus yellow, covered with white hairs. Chelicerae light brown, with yellow apices. Maxillae and labium orange. Sternum grey, with a yellow central spot. Abdomen: dorsum brown-orange, with colour markings as shown in Fig. 4; venter and sides yellow. All legs orange, with legs I being the darkest. All femora with prolateral dark stripes. Epigyne and spermathecae as in Figs 1–3.

DISTRIBUTION. This is the first formal record of *I. flavipes* in Middle Asia. So the species is currently known only from two localities: Karakorum [Caporiacco, 1935; Andreeva et al., 1984] and Repetek, Turkmenistan [present data] (Map 6).




Figs 18–27. ♂ genitalia and somatic characters of *Langona pallidula* sp.n. (holotype) (18–24) and *L. tartarica* (from Uzbekistan) (25–27): 18, 19, 21 — palpus, ventral, lateral and rear views; 22, 26 — body colouration; 23, 27 — first leg colouration; 24, 25 — faces. Scales: 0.1 mm (18–21); 1 mm (22, 24, 25, 26) and 0.5 mm (23, 27).

Рис. 18–27. Гениталии самцов и соматические признаки *Langona pallidula* sp.n. (holotype) (18–24) и *L. tartarica* (из Узбекистана) (25–27): 18, 19, 21 — пальпус, вентрально, латерально и сзади; 22, 26 — окраска тела; 23, 27 — окраска первой ноги; 24, 25 — фейсы. Масштаб: 0,1 мм (18–21); 1 мм (22, 24, 25, 26) и 0,5 мм (23, 27).

## *Langona* Simon, 1901

### *Langona tartarica* (Charitonov, 1946)
Figs 25–36, Map 5.

Material. TAJIKISTAN: 4 ♂♂, 1 ♀ (ISEA), Kurgan-Tyube Area, Kuibyshevsk Distr., Vakhsh River, 10.1988, A.K.; 1♀ (ISEA), Dushanbe, 13.04.1991, S.O.; 1 ♂, 1 ♀ (ISEA), S of Nurekskoe Reservoir, Sanglok Mt. Range, ~2100 m a.s.l., 7.05.1992, S.Z.; 1 ♀ (ZMMU), Pyandzhinsky Karatau Mt. Range, Astana, ~1300 m a.s.l., 23.04.1991, S.O. — TURKMENISTAN: 1 ♂ (ZMMU), Ashghabad [= Ashkhabad], Baghir, 2.05.1984, A. Sakhchiev; 1 ♂ (SVO), same locality, 26.03.1994, S.O.; 1 ♀ (ISEA), Kizil-Arvat, 14–23.05.1986, A.V. Abramov; 1 ♂, 1 ♀ (ISEA), ca 8 km N of Guzhghy [= Kushka], Morgunovka, 18.04.1977, M.T. Sternbergs; 1 ♀ (ZMMU), Sultanbent, 31.05.1929, V.S.; 1 ♀ (ZMMU), Murghab riverside, 29.05.1929, V.S.; 1 ♂ (ZISP), Krasnovodsk, 4.07.1929, V.S.; 1♂ (ZISP), C-Kopetdagh, Firyuza, 17–24.03.1979, G.T. Kuznetsov; 1 ♂ (ZISP), same locality, Ghermab, 06.1982, G.K.; 1 ♂ (ISEA), W-Kuhitangtau Mt. Range, 5 km SE of Bazar-Depe, 5–11.04.1991, V. D. & V.K. Zinchenko. — UZBEKISTAN: 1 ♂ (PSU, lectotype of *Phlegra tartarica*, designated herein), 1 ♀ (PSU, paralectotype of *Phlegra tartarica*, designated herein), Kashkadarya Area, Shakhrisyabz, 1–31.03.1942, D.M. Fedotov; 7 ♂♂, 2 ♀♀ (ISEA), same locality, 26.04.1993, D.L; 1 ♂ (ISEA), same area, 8 km SE of Guzar, 1.05.1994, A.Z.; 3 ♂♂, 1 ♀ (ISEA), Samarkand Area: Sovetabad Distr., Ulus, 7.05.1990, A.Z. & A.F.; 2 ♂♂, (ISEA), Tashkent, 4.05.1990, A.Z. & A.F.; 1 ♂ (ISEA), Samarkand, Siab River, 11.05.1990, A.F.; 1♀ (IZW) Surkhandarya Area, Dzhar-Kurgan, 14.06.1966, E. Martynova; 1♂ (ISEA), same area, 2 km W of Derbent, 15.05.1994, A.Z.; 2 ♂♂, 1 ♀ (SVO), 1 ♀ (AVG), Babatagh Mt. Range, Ak-Mechet, 19–26.04.1994, S.O., A.G.; 2 ♂♂ (SVO), Bukhara Area, 7.5 km S of Alat, 24.04.1993, S.O.; 12 ♂♂, 3 ♀♀ (ISEA), 1 ♂, 1 ♀ (AVG), same area, ca 20 km S of Kagan, 19.05.1994, S.O., A.Z. & A.G.

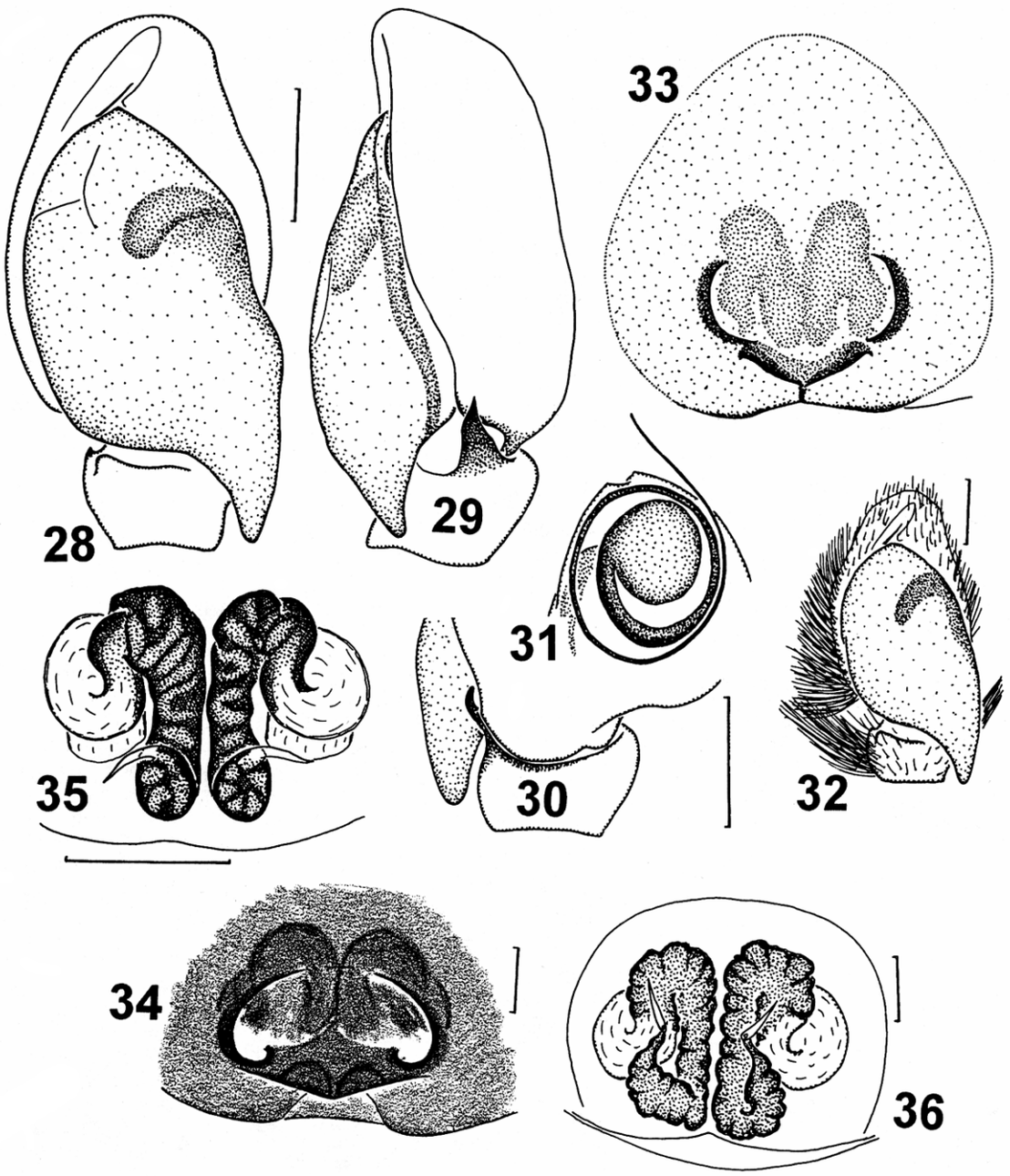
COMMENTS. In Middle Asia, this characteristic Turan lowland species (Map 5) has hitherto been reported from Tajikistan: Dushanbe and Tigrovaya Balka [Andreeva, 1976]; Kazakhstan: Ustyurt Plateau [Zyuzin & Tarabaev, 1994]; Turkmenistan: Firyuza [Kuznetsov & Fet, 1986]; and Uzbekistan: Shakhrisyabz [Kharitonov, 1946: sub *Phlegra tartarica*, 1969; Nenilin, 1984a] and Dzhar-Kurgan [Andreeva, 1976].

### *Langona pallidula* **sp.n.**
Figs 18–24, Map 5.

MATERIAL. Holotype ♂ (ISEA), Turkmenistan, Repetek, 18.04.1993, S.O.

DIAGNOSIS. The new species is most closely related to *L. tartarica*, but a number of colour characters clearly separate both species from each other (cf. Figs. 22–24 and 25–26). As for the general appearance, the new species is visibly paler than its closest relative *L. tartarica* (cf. Figs 22 and 26), the fact being expressed in the name of *L. pallida*.

DESCRIPTION. MALE. Measurements. Carapace 2.85 long, 2.00 wide, 1.25 high at PLE. Ocular area 0.88




Figs 28–36. Genitalia of *Langona tartarica* (specimens from Uzbekistan): 28, 32 — ♂ palp, ventral view; 29 — ditto, lateral view; 30 — ♂ tibial apophysis, rear view; 31 — embolus, dorsal view; 33, 34 — epigyne; 35, 36 — spermathecae. Scales: 0.2 mm (28–33, 35) and 0.1 mm (34, 36).

Рис. 28–36. Гениталии *Langona tartarica* (экземпляры из Узбекистана): 28, 32 — пальпус самца, вентрально; 29 — тоже, латерально; 30 — тибиальный отросток, латерально; 31 — эмболюс, дорсально; 33, 34 — эпигина; 35, 36 — сперматека. Масштаб: 0,2 мм (28–33, 35) and 0,1 мм (34, 36).

long, 1.50 wide anteriorly and 1.38 wide posteriorly. Diameter of AME 0.38. Abdomen 2.50 long, 1.65 wide. Cheliceral length 0.57. Length of leg segments: leg I: 1.38 + 0.88 + 0.88 + 0.63 + 0.75; leg II: 1.25 + 0.63 + 0.63 + 0.50 + 0.75; leg III: 1.75 + 0.75 + 1.13 + 1.25 + 1.00; leg IV: 1.50 + 0.75 + 1.13 + 1.50 + 1.00. Leg spination. Leg I: Fm d.0-1-1-4; Pt pr.0-1-0; Tb pr.2-2, v.1-1-2ap.; Mt pr. and rt.1-1ap., v.2-2ap. Leg II: Fm d.0-1-2-4; Pt pr.0-1-0; Tb pr.1-1-1, rt.1-1, v.1-1-2ap.; Mt pr.1-2ap., rt.11ap., v.2-2ap. Leg III: Fm d.0-1-2-5; Pt pr. and rt.0-1-0; Tb d.1-2-2; pr. and rt.1-1, v.1-2ap.; Mt d.1-1-0, pr. and rt.1-2ap., v.2-2ap. Leg IV: Fm d.0-1-1-5; Pt pr. and rt.0-1-0; Tb d.1-2-2ap., pr. and rt.1-1, v.1-2ap.; Mt d.3-2-3ap., v.1-1-2ap. Carapace brown, with a pair of white longitudinal stripes of hairs (Fig. 22). Carapace covered with white and grey scales. Eye field black. Carapace edges yellow/white. Clypeus orange, with a pale grey V-shaped figure (Fig. 22). Chelicerae yellow, their anteromedian sides with a

narrow stripe of black hairs (Fig. 24). Sternum, maxillae and labium yellow. Dorsum grey, with a marked cardial spot (Fig. 22). Legs yellow with irregular grey patches. Palpal structure as in Figs 18–21.

DISTRIBUTION. The type locality only (Map 5).

ETYMOLOGY. The species epithet is derived from the Latin word "pallidum" meaning "pale".

*Leptorchestes* Thorell, 1870

*Leptorchestes* sp.
Map 1.

Material. TURKMENISTAN: 1 ♂ (ISEA), near Kara-Kala, 27.05.1983, S.I. Zabelin.

COMMENTS. This sample represents a new species so far known from Israel [Prószyński, personal communication] and Turkmenistan: SW-Kopetdagh [current data] (Map 1). In the latter case, the species has erroneously been recorded under the name *Leptorchestes berolinensis* [Fet, 1983; Nenilin, 1985; Mikhailov & Fet, 1994; Wesołowska, 1996]. The species will be described by Prof. J. Prószyński in his forthcoming monograph devoted to Israeli salticids.

*Macaroeris* Wunderlich, 1987

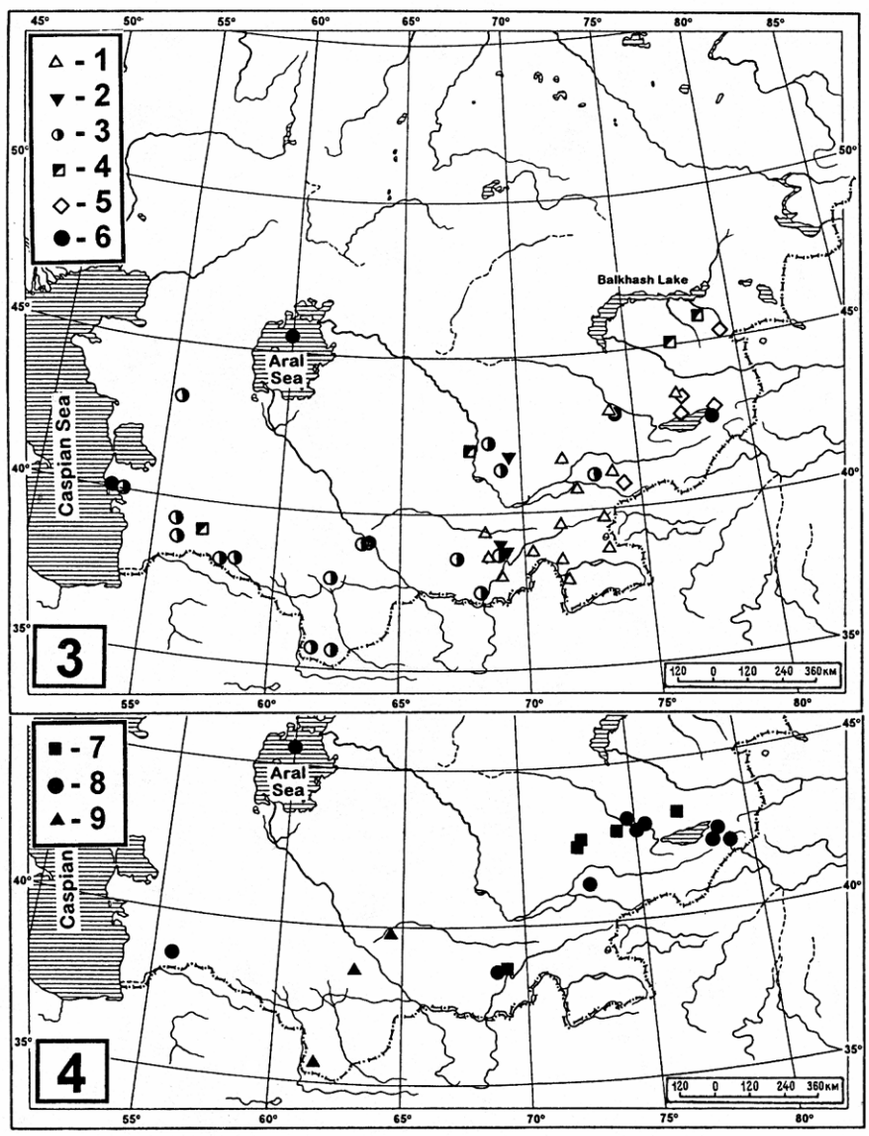
*Macaroeris asiaticus* **sp.n.**
Figs 12–14, Map 11.

MATERIAL. Holotype ♀ (ISEA), Kazakhstan, Almaty Area, Almaatinsky Reserve, Pravyi Talgar River, 17.09.1984, S.O.

Paratype: 1♀ (ZMMU), Kyrghyzstan, Osh Area, Uzgen, Kipchalma, 23.04.1983, S.N. Rybin; 1♀ (ISEA), Kyrghyzstan, E part of Susamyr Mt. Range, Kobuksu ravine, 2200 m a.s.l., 5.07.1996, D.A. Milko.

DIAGNOSIS. *M. asiaticus* is most closely related to two Macaronesian species, *M. litoralis* Wunderlich, 1991 and *M. moebi* (Bösenberg, 1895), but it can be easily distinguished from them by the transverse chitinous flap of the epigyne and the structure of the spermathecae [cf. Figs 12, 13 and Wunderlich, 1991: figs 842–847].

DESCRIPTION. FEMALE. Measurements. Carapace 2.75 long, 2.00 wide, 1.25 high at PLE. Ocular area 1.00 long, 1.75 wide anteriorly and 1.75 wide posteriorly. Diameter of AME 0.50. Abdomen 3.25 long, 2.10 wide. Cheliceral length 1.00. Length of leg segments: leg I: 1.38 + 1.00 + 1.00 + 0.75 + 0.75; leg II: 1.25 + 0.75 + 0.75 + 0.55 + 0.75; leg III: 1.00 + 0.63 + 0.63 + 0.63 + 0.63; leg IV: 1.25 + 0.75 + 1.00 + 0.75 + 0.75. Leg spination. Leg I: Fm d.0-1-1-3; Tb v.2-2-2ap.; Mt v.2-2ap. Leg II: Fm d.0-1-1-3; Tb pr.0-1, v.1-1-2ap.; Mt v.2-2ap. Leg III: Fm d.0-1-1-2; Tb pr.0-1, rt.1-1 v.1-0-1ap.; Mt 4ap. Leg IV: Fm d.0-1-1-0; Tb rt.0-1, v.1-0-1ap.; Mt 3ap. Colouration. Carapace brown, covered with white scales. Eye field orange, black arround eyes. Clypeus densely




Maps 3–4. Localities of *Neon levis* (7), *Plexippus coccineus* (3), *P. kondarensis* (2), *Sitticus ammophilus* (6), *S. ansobicus* (1), *S. avocator* (8), *S. karakumensis* (9), *S. kazakhstanicus* (4) and *S. monstrabilis* (5) in Middle Asia.

Карты 3–4. Местонахождения *Neon levis* (7), *Plexippus coccineus* (3), *P. kondarensis* (2), *Sitticus ammophilus* (6), *S. ansobicus* (1), *S. avocator* (8), *S. karakumensis* (9), *S. kazakhstanicus* (4) и *S. monstrabilis* (5) в Средней Азии.

covered with white hairs. Chelicerae dark brown. Maxillae and labium brown. Sternum light brown. Abdomen: dorsum brown, with a yellow lanceolate cardial spot; venter yellow (Fig. 14). All legs yellow. Carapace, abdomen and all legs sparsely covered with erect hairs. Epigyne and spermathecae as in Figs 12, 13.

DISTRIBUTION. S-Kazakhstan and Kyrghyzstan (Map 11).

ETYMOLOGY. The species epithet refers to the terra typica.

### *Macaroeris nidicolens* (Walckenaer, 1802)
Map 5.

Material. TURKMENISTAN: 1 ♀ (ISEA), SW-Kopetdagh, Aidere, 11.06.1983, B.P. Zakharov.

Comparative material. RUSSIA: 1 ♂ (ISEA), Chechnya, Groznyi, 5–10.07.1988, A.S. Ryabukhin; 1♀ (ISEA), Daghestan, Derbent, 20.05.1989, P.D. — AZERBAIJAN: 1 ♀(ISEA), Kazakh, Poylu, 6.05.1986, P.D.; 1♀ (ISEA), Khachmas Distr., Mukhtadir, 30.06.1977, P.D.; 1 ♀(ZMMU), Lenkoran Distr., Avrora, 20.06.1985, H. Aliev.

DISTRIBUTION. In Middle Asia, this W-Palaearctic subboreal species [see Wunderlich, 1991] has hitherto been reported only from SW-Kopetdagh, Turkmenistan [Nenilin, 1984a: sub *Eris n.*; Fet, 1985a: *Eris n.*; Wesołowska, 1996]. All localities of *M. nidicolens* in the Caucasus and Middle Asia are shown in Map 5.

## *Marpissa* C.L. Koch, 1846

### *Marpissa canestrinii* Ninni in Canestrini & Pavesi, 1868
Map 2.

*Marpessa obscura* Kroneberg, 1875: 46–47, Pl. V, fig. 33a–c. (♂ holotype and ♀ juv. from ZMMU, re-examined), **syn.n.**

*Mithion pichoni* Schenkel, 1963: 414–416, fig. 238a, b. Synonymized with *Marpissa* (*Mithion*) *tschekiangensis* by Wesołowska [1981].

*M. salsophila* Tyshchenko, 1965: 704, f. 11 (♂ holotype from ZISP, re-examined). Synonymized with *Marpissa canestrinii* by Nemenz [1967].

*Mithion tschekiangensis* Schenkel, 1963: 418–419, fig. 240a–f. Synonymized with *Marpissa obscura* by Nenilin [1984b].

For a complete list of references and synonyms see Prószyński [1990].

Material. KAZAKHSTAN: 1 ♂ (ZISP, holotype of *Marpissa salsophila*), Akmola Area, Mt. Kokshetau, near River Basagay-Zen, 13.05.1957, V.P. Tyshchenko; 5 ♂♂, 4 ♀♀ (ISEA), S-Kazakhstan (= Chimkent) Area, ca 5 km N of Chardara, 28.04.1993, D.L. & A.Z. — UZBEKISTAN: 1 ♂ (ZMMU, Ta-1176, ♂ holotype of *Marpessa obscura*, palpless), 1 ♀ juv. (ZMMU), Samarkand, coll. Fedtschenko. — KYRGHYZSTAN: 3 ♂♂, 1 ♀ (subadult), (ZISP), W-Tian-Shan Mts., Fergansky Mt. Range, Ermendy near Toskaul, ~400 m a.s.l.; 4.04.1983, S.Z.; 2 ♀♀ (ZMMU), same range, Mt. Zindan, 11.08.1981, S.Z.; 2 ♂♂ (ZISP), Dzhalalabad Area, Arslanbob, May 1982, S.Z.; 3 ♀♀ (ZMMU), same distr., Yarodar, 8.06.1981, S.Z.

Comparative material. RUSSIA: 1 ♂ (ZMMU), Krasnodar Prov., Slavyansk Distr., 24.06.1969, N. Egorova; 2 ♂♂ (IZW), Astrakhanski Reserve (Obzorowski Uchastok), 4.09.1958, M. Yozefik & Z. Swirski. — AUSTRIA: 2 ♂♂ (IZW), 07.1966, H. Nementz; 2♀♀ (IZW), same locality, 26.08.1970, H. Nementz. — HUNGARY 2♀♀ (ISEA), Kiskunsag, Fulopszallas, Kelemen-szek, 10.09.1991, V.P. Pekin. — AZERBAIJAN: 1 ♀ (ISEA), 25–30 km NE of Shemakha, Pirkuli Reserve, 9.09.1984, D.L.

DISTRIBUTION. *M. canestrinii* displays a typical Euro-Middle Asian subboreal distribution pattern, with the easternmost localities lying in China (Xinjiang) [Schenkel, 1963: sub *Mithion tschekiangensis* and *M. pichoni*; Wesołowska, 1981: sub *M. tschekiangensis*]. In Middle Asia, the species has repeatedly been recorded under different names from Uzbekistan: Samarkand [Kroneberg, 1875: sub *Marpessa obscura*]; Kyrghyzstan: near Bishkek, Fergansky Mt. Range (Yarodar, Zindan and Arslanbob) [Nenilin, 1984b: sub *Marpissa obscura*]; and Kazakhstan: Akmola Area (Kokshetau Mt.) [Tyshchenko, 1965; Prószyński, 1979; both sub *Marpissa salsophila*]. According to Nenilin [1984a], Reimoser's record from Turkestan [see Kharitonov, 1932] could have actually been made in Kashgar, China. All localities of *M. canestrinii* in Middle Asia are shown in Map 2.

COMMENTS. Although the ♂ holotype of *Marpissa obscura* Kroneberg, 1875 is palpless, it is evident from its general appearance (e.g. body colouration) that this specimen certainly belongs to *M. canestrinii* Ninni, 1868, a well-known S-European species. In addition, it is very likely that *M. magister* (Karsch, 1879) from the Far East can prove to represent only another junior synonym of *M. canestrinii*. This problem requires special attention in the future.

### *Marpissa nivoyi* (Lucas, 1846)
Map 8.

Material. KAZAKHSTAN: 1 ♂, 1 ♀ (ISEA), Chimkent Area, ca 5 km N of Chardara, 28.04.1993, D.L. & A.Z. — KYRGHYZSTAN: 3 ♂♂, 2 ♀♀ (ZISP), near Bishkek, 29-30.04.1979, S.Z.

Comparative material. AZERBAIJAN: 1 ♂, 1 ♀ (ISEA), Khachmas Distr., Nabran, 7.07.1976, P.D.

DISTRIBUTION. This is a S-European – Middle Asian subboreal species. In Middle Asia, it has hitherto been reported from Kyrghyzstan: near Bishkek [Nenilin, 1984b; 1985]; and Kazakhstan: Ustyurt Plateau [Logunov, 1992a; Zyuzin & Tarabaev, 1994]. All localities of *M. nivoyi* in Middle Asia are shown in Map 8.

### *Marpissa pomatia* (Walckenaer, 1802)
Map 5.

Material. KYRGHYZSTAN: 1 ♂, 1 ♀ (ZISP), near Bishkek, 18.04.1979, S.Z.

Comparative material. Numerous specimens from Siberia and the Russian Far East.

DISTRIBUTION. The species displays a trans-Eurasian temperate distribution pattern. In Middle Asia, it has hitherto been reported from Kyrghyzstan: Bishkek, Cholpon-Ata [Nenilin, 1984b]; and Kazakhstan: Ust-Kamenogorsk [Savelyeva, 1970, 1990] and near Almaty [Spassky & Shnitnikov, 1937; Kharitonov, 1936; Nenilin, 1984a]. All localities of *M. pomatia* in Middle Asia are shown in Map 5.

## *Neon* Simon, 1876

### *Neon levis* (Simon, 1871)
Map 4.

Material. KYRGHYZSTAN: 1 ♂ (ISEA), Dzhalalabad Area, Sary-Chelek Reserve, ca 4 km NW of Arkit, Tumaniak River, 20.06.1992, A.F. & A.Z.; 1♀ (SVO), same locality, 29.05.1993, S.O.; 1 ♂ (ISEA), 1 ♀ (SVO), Kirghizsky Mt. Range, ca 25 km S of Bishkek, Malinovoe Canyon, Ala-Archa, 28.07–20.09.1984, S.O.; 1 ♀ (SVO), Sovkhoz Kirova, 1200 m a.s.l., 1.06.1981, S.O. — KAZAKHSTAN: 1 ♀ (ISEA), near Almaty, Aksai Canyon, ~1300

m a.s.l., 28.08.1983, Y.M. — TAJIKISTAN: 2♀♀ (ISEA), Hissar Mt. Range, Kondara Canyon, 10.07.1988, S.O.

COMMENTS. *N. levis* is a Euro-Siberio-Middle Asian species, with the easternmost localities lying in S-Siberia (Buryatia) [Danilov & Logunov, 1994] and China (Xinjiang) [Hu & Wu, 1989]. In Middle Asia, this species has been recorded so far from Kyrghyzstan: near Bishkek, Fergansky and Chatkalsky Mt. ranges (Sary-Chelek), Charvak, Zindan, Sovkhoz Kirova [Nenilin, 1984a,b, 1985; Zonstein, 1984; current data]; Kazakhstan: near Almaty [current data]; and Tajikistan: Kondara Canyon [current data]. All localities of *N. levis* in Middle Asia are shown in Map 4.

## *Pellenes* Simon, 1876

### *Pellenes dilutus* Logunov, 1995
Map 12.

*Pellenes tesin* Logunov, 1995: 240, figs 8–11 (♂ holotype from ISEA, re-examined), **syn.n.**

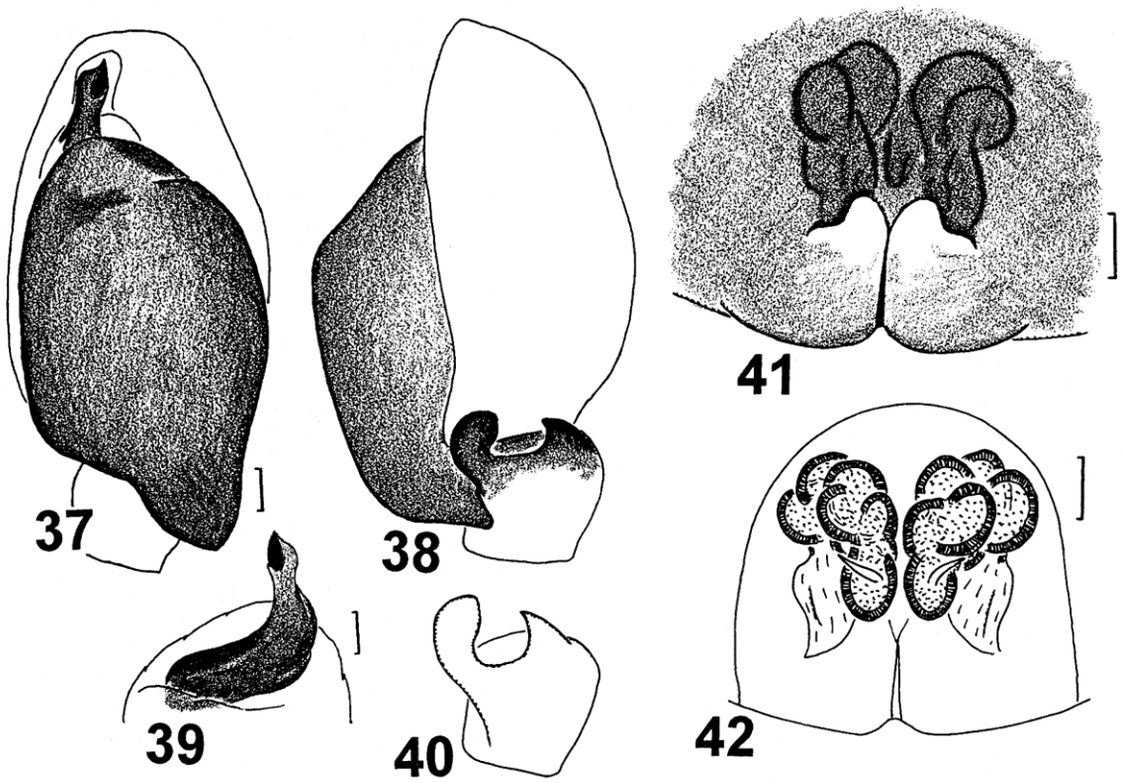
Material. KAZAKHSTAN: 1 ♂ (ISEA), S-Kazakhstan (= Chimkent) Area, Kyzylkumy Desert, Mt. Karamola, 14–18.05.1994, A.Z.; 1 ♂ (ISEA), same area, ca 37 km WSW of Bairkum, Baimarkhan, 10–11.05.1995, A.Z.

COMMENTS. Up to now, *P. dilutus* has been known from a single female [Logunov, 1995]. The discovery in the S-Kazakhstan Area of two males of *P. tesin*, a taxon originally described from males deriving from Turkmenistan (Tashauz), clearly shows that both species are the same. The name *P. dilutus* is kept as the valid one, as its description precedes that of *P. tesin*. All localities of *P. dilutus* in Middle Asia are shown in Fig. 12.

## *Philaeus* Thorell, 1869

### *Philaeus chrysops* (Poda, 1761)
Map 9.

Material. KAZAKHSTAN: 1 ♀ (ZMMU), near Almaty, Medeo, 29.08.1992, K.M.; 2 ♂♂, 1 ♀ (AVG), same locality, 30.06.1993, A.G.; 4♂♂ (ISEA), Almaty Area, Zhambyl [=Dzhambul] Distr., 80-95 km NW of Uzunagach, Aytau Mts., 12.05.1992, A.F. & A.Z.; 1♀ (ISEA), same area and distr., Fabrichnyi, 5.06.1994, A.Z.; 2 ♂♂, 1 ♀ (AVG), same area, 9 km N of Kapchagai, 22-23.04.1996, A.G.; 1 ♂ (ZMMU), same area, Krasnogorsk Distr., Gheorghievka, 22.05.1984, S.O.; 1 ♂ (ZMMU), same area, road from Almaty to Gheorghievka, ca 8 km W of Targap, date ?, S.I. Ibraev; 1 ♂, 1 ♀ (ZMMU), same area, Moynkumsky Distr., ca 6 km SE of Khantau, Khantau Mts., 9–11.06.1990, A.F.; 1 ♂ (ZMMU), same area, Sarysu Distr., ca 40 km NE of Ulanbel, Betpak-Dala Desert, 20.05.1991, S.I. Ibraev & A.Z.; 1 ♀ (ZISP), Dzhungarsky Alatau, 4 km NE of Topolevka, 7.06.1957, I.M. Kerzhner; 3 ♂♂, 1 ♀ (ZISP), Akmola Area, Mt. Kokshetau, 28.05–30.06.1957, V.P. Tyshchenko; 3 ♂♂, 8 ♀♀ (ZMMU), 6 ♂♂, 7♀♀ (ISEA), S-Kazakhstan [= Chimkent] Area, Temirlanovka Distr., Arys, 25.04–25.05.1988, D.L.; 1♀ (AVG), same locality, 23.06.1993, A.G.; 1♂, 2♀♀ (ISEA), same area, Lenger Distr., 5 km SE of Kaskasu, 20.06.1993, A.G.; 1 ♀ (ZISP), same area, Karatau Mt. Range, Baraldau River valley, 2.05.1984, coll. ?; 1 ♂, 2 ♀♀ (SVO), same area, 47 km N of Turkestan, 48°43′N, 68°12′E, - 650 m a.s.l., 8–10.05.1994. S.O.; 1 ♂, 1 ♀ (ZISP), same area, Keles, 25.04.1984, coll. ?; 1 ♀ (AGV), Zhambyl [=Dzhambul] env., SE fooothills of Ul'kem-Buryltau Mts., 4.06.1993, S.R.Nasyrova; 1 ♀ (AVG), Zhambyl Area, 6 km SW of Kurdai, Chu-Iliyskie Mts., 20.04.1997, A.Z. & A.G.; 1♂, 1♀ (ISEA), Taldy-Kurgan Area, 20–40 km NE of Tekeli, 14.06.1993, V.D.; 1 ♂ (ISEA), E-Kazakhstan Area, 10 km NW of Ust-Kamenogorsk, 4.06.1996, V.K. Zinchenko; 2 ♂♂ (ISEA), Pavlodar Area, Bayanaul Distr., Lake Taraigyr, 25.05.1991, O.L. — KYRGHYZSTAN: 4 ♂♂ (ZISP), Cholpon-Ata, 25.08.1974, S.Z.; 2 ♀♀ (ZISP), same locality, 20–24.06.1977, S.Z.; 1 ♂ (ZISP), NE Fergana, near Kara-Alma, upper reaches of Kugart River, 07–08.1987, L.A. Nesov; 2♂♂, 4♀♀ (ZMMU), ca 5 km from At-Bashi, 15.06.1987, Ark.A. Schileyko; 1♂ (ZMMU), Kachkorka, 24.06.1987, M.E. Chernyakhovsky & Ark. A Schileyko; 1 ♂, 1 ♀ (ISEA), Kirghizsky Mt. Range, Kara-Archa Canyon, ~1400 m a.s.l., 42°47′N, 41°48′E, 3–4.05.1994, D.A. Milko; 1 ♀ (ZMMU), Susamyrtoo Mt. Range, 3–8 km SW of Kyzyl-Oi, 23–27.07.1993, D.A. Milko; 3♀♀ (ZMMU), Zeravshansky Mt. Range, Pass Aman-Kutan, 04.1993, coll. ?; 2 ♀♀ (ZISP), Dzhalal-Abad, 15.06.1979, S.Z.; 1 ♂ (ZMMU), Dzhalalabad Area, Sary-Chelek Reserve, ca 2 km S of Arkit, 20.06.1992, A.F.; 1 ♀ (ZMMU), same locality, 28–31.05.1993, D.A. Milko; 1 ♂, 1 ♀ (ISEA), same area, Arslanbob, Yarodar stand, 16–19.05.1993, D.A. Milko; 1 ♂ (ZMMU), Inner Tian-Shan, Sonkeltau Mt. Range, Shilbili Canyon, 9.07.1987, S.O.; 4 ♂♂, 2 ♀♀ (ZISP), Issyk-Kul Area, Dolinka, 26.06.1977, S.Z.; 2♂♂ (ZISP), same area, Kuturga, 4.07.1977, S.Z.; 1 ♂ (ZISP), Toru-Aighyr, 12.06.1977, S.Z.; 1♀ (ZMMU), Terskei-Alatoo Mt. Range, Tosar Canyon, ~1700 m a.s.l., 10.08.1987, S.O.; 1♀ (ZISP), Bozteri, 9.08.1977, S.Z.; 1 ♂ (ISEA), SE Fergana, near Kara-Alma, Kugart River, 06–07.1987, L.A. Nesov. — TAJIKISTAN: 1 ♀ (ISEA), Gornobadakhshan Area, Lake Drukkul, 08.1989, A.V. Abramov, 4 ♂♂ (subadult) (ZISP), Dushanbe, 23.04.1965, E. Martynovsky; 1♂, 1♀ (ZISP), Gandzhina, 20.04.1966, coll. ? — TURKMENISTAN: 2 ♂♂ (ISEA), 10-18 km N of Guzhghy [= Kushka], ca 9 km N of Chemen-Ibid, 18.04.1993, D.A. Milko; 2 ♂♂, 2 ♀♀ (ISEA), Badhkyz Reserve, Kyzyl-Dzar, 10–12.04.1993, D.L.; 1 ♀ (ISEA), ca 8 km NE of Nebit-Dagh, Bolshoi Balkhan Mt. Range, 380–1000 m a.s.l., 1.04.1993, D.L. & A.Z.; 4 ♂♂, 6 ♀♀ (ISEA), ca 40 km SE of Pulikhatum, Zulfagarsky Mt. Range, ~1000 m a.s.l., 13–14.04.1993, D.L.; 1 ♀ (ZISP), SW-Kopetdagh, Ipaikala, 23.05.1984, V.Ya. Fet; 1 ♂ (ZISP), SW-Kopetdagh, Aidere, 12.05.1982, V.Ya. Fet; 10 juv (ZMMU), same area, ca 25 km of the Sumbar River, E of Kara-Kala, 1.02.1982, K.M.; 1 ♀ (ZISP), same locality, 9–11.06.1979, V.Ya. Fet; 1 ♂ (ZISP), same locality, Eldere, 17.05.1982, V.Ya. Fet; 2♂♂, 5♀♀ (ISEA), C-Kopetdagh, ca 20 km E of Nokhur, upper reaches of Karsache River, 27–27.04.1991, V.D.; 8 ♂♂, 5 ♀♀ (ISEA), C-Kopedagh, Firyuza, 4.04–28.05.1991, V.D.; 1♂ (ZISP), same locality, 30.05.1903, K.O. Anger; 11 ♂♂, 8 ♀♀ (ISEA), same locality, 1.05.1991, V.K. Zinchenko; 1 ♂ (ISEA), same, ca 12 km of Ankau (?), date ?, S.L. Kalabin; 1 ♂ (ISEA), ca 12 km SE of Aktau, Kel-Techintar River valley, 25.04.1988, A.V. Barkalov; 3 ♂♂, 6 ♀♀ (ISEA), W-Kuhitangtau, Mt. Kara-Belent, 10.04–14.08.1991, V.D.; 1♂, 10♀♀ (ISEA), same locality, 5-7 km SE of Bazar-Depe, 8.04–19.05.1991, V.D; 1 ♂ (ISEA), same locality, near Bazar-Depe, Suvdoker, 11.04.1991, V.D.; 1 ♀ (ZMMU), near Ashghabad, Bikrovka, 14.05.1996, V.K. Zinchenko; 1♂, 2♀♀ (ZMMU), Kelif, 21.04.1976, A.K. — UZBEKSTAN: 3 ♂♂, 1 ♀ (ZISP), Varganzy, 31.05–1.06.1978, V.I. Ovtsharenko; 1♀ (ZMMU), Yakkabag Distr., Hissar Mt. Range, Kaltakol, ~2500 m a.s.l., date and coll. ?; 1♀ (ZMMU), ca 80 km N of Tashkent, Keksu Canyon, Brichmula, 1.05.1986, A. Kurbatov; 1♀ (juv), (ZISP), Tashkent, 10.04.1978, I.A. Darevsky; 1 ♂, 4♀♀ (ZISP), Tashkent & Syrdarya areas, 1978–1979, coll. ?; 1 ♂, 5 ♀♀ (ZISP), Nuratau Mt. Range, 14.06.1976, A.K.; 1 ♂, 3 ♀♀ (ISEA), Bukhara Area, ca 30 km NE of Shakhrisyabz, Ishkent, 25–26.04.1993, D.L.; 5 ♀♀ (PSU), same area, Shakhrizyabz, 7–11.10.1941, D.M. Fedotov; 2♂♂ (PSU), same locality, 14.05.1942, D.M. Fedotov; 15♂♂, 17♀♀ (ISEA), same area, ca. 7 km N of Kitab, S foothills of Zeravshansky Mt. Range, ~800 m a.s.l., 26.04.1993, D.L. & A. Z.; 3 ♂♂ (SVO), same range, Pass Aman-Kutan, 27.04.1993, S.O.; 2♂♂ (ZMMU), Samarkand, Shimaton, 6.05.1990, A.Z.; 5 ♂♂, 2 ♀♀ (ZISP), Samarkand Area, Khishrau, Dargom Canyon, 1.05.1980, A.B. Nenilin; 1 ♀ (ZMMU), Samarkand, 6–7.05.1980, V. Aleshin; 2 ♂♂, 1 ♀ (ZISP), Kashkadarya Area, Kyzylsu Reserve, summer 1983, M.P. Arimdzhanov; 2 ♂♂, 3 ♀♀ (ISEA), Sary-Assil, Tupolang River, 1.05.1976, A.K.; 1♂ (ISEA), ca 60 km NNW of Kokand, Pass Kamchik, 41°02′N, 70°32′E, 16.05.1994, D.A. Milko; 1♂, 1♀ (AVG), 5 km W of Ak-Mechet, Babaragh Mt. Range, 18.04–6.05.1994, A.G.; 1 ♂, 1 ♀ (ISEA), Surkhandariya Area, 2 km W of Derbent, 15.05.1994, A.Z.




Figs 37–42. Genitalia of *Phlegra cinereofasciata* (syntypes from the Pyrenees: Banyuls): 38, 39 —♂ palp, ventral and lateral views; 39 — embolus, dorsal view; 40 — ♂ tibial apophysis, lateral view; 41 — epigyne; 42 — spermathecae. Scale: 0.1 mm.

Рис. 37–42. Гениталии *Phlegra cinereofasciata* (синтипы из Пиренеев: Banyuls): 38, 39 — пальпус самца, вентрально и латерально; 39 — эмболюс, дорсально; 40 — тибиальный отросток, латерально; 41 — эпигина; 42 — сперматека. Масштаб: 0,1 мм.

Uncertain localities: 1 ♂ (ZISP), Bayram-Kul', 19.08.1907, N.A. Zarudny; 1 ♀ (ZMMU), "Vymburovo (or Bymburovo)", 17.06–6.09.1991; 1♂, 1♀ (PSU), "Kshtuit (?)", 30.05.1908, D.M. Fedotov.

Comparative material. AZERBAIJAN: 1 ♂, 1 ♀ (ISEA), Ismailly Distr., Ivanovka, 21.06.1988, P.D.; 3♂♂, 3♀♀ (ISEA), 25-30 km NE of Shemakha, Pirkuli Reserve, 1300–1400 m a.s.l., 23.05–2.06.1984, D.L.; 1 ♀ (ISEA), same locality, 1800–1900 m a.s.l., D.L.; 1 ♂ (ISEA), Khachmas Distr., Mukhtandir, 30.06.1977, P.D.; 3 ♂♂, 1 ♀ (ISEA), Apsheron Peninsula, near Baku, 29.03.1976, P.D.; 1 ♂ (ZMMU), same locality, 25.04.1989, P.D.; 1 ♂ (ZMMU), same locality, 19.05.1985, Aslakova; 1 ♂ (ZISP), same locality, 10.06.1978, P.D.; 1 ♂, 1 ♀ (ISEA), same locality, Baladzhary, 12.06.1981, P.D.; 1 ♂, 1 ♀ (ISEA), same locality, Mardakeny, 5.06.1977, P.D.; 1♀ (ISEA), same locality, 23.06.1984, P.D.; 1 ♂ (ZMMU), same locality, Dzheyran-Batan Reservoir, 15.05.1979, P.D.; 2 ♀♀ (ISEA), Khanlar, Chandzhachay River, 23.05.1973, P.D.; 1 ♂, 1 ♀ (ISEA), Neftechaly Distr., Bank, Kura River, 1.06.1976, P.D.; 3 ♀♀ (ISEA), Lerik Distr., Zuvand, Gosmalian, ~1300 m a.s.l., 28.06.1985, P.D.; 2 ♀♀ (ISEA), same locality, 29–31.05.1986, V.V. Belov; 1 ♀ (ISEA), same locality, 12.06.1981, P.D.; 2♀♀ (ZMMU), Lerik, 15.06.1983, H. Aliev; 1♂, 1 ♀ (ISEA), Shusha, ~1200 m a.s.l., 7.08.1986, P.D.; 2♂♂ (ISEA), Belokany, Mazamchay, 10.07.1985, P.D.; 2 ♂♂ (ISEA), Kakhi, Kashkachay, 24.06.1977, P.D.; 1 ♀ (ISEA), Turianchai Reserve, 24.07.1988, P.D. — GEORGIA: 1♀ (PSU), Tbilisi, 23.05.1938, T.S. Mkheidze; 2♂♂, 1 ♀ (ZISP), Lagodekhi Reserve, Aldashi River valley, 26.06.1982, 12.06.1982, Y.M.; 1♀ (ISEA), Kutaisi, 25.04.1977, P.D. — ARMENIA: 3♂♂, 13♀♀ (ISEA), near Sevan, ~2100 m a.s.l., 07.1984, D.L. — RUSSIA: 1 ♂ (ZMMU), Teberda, Dombai, Mt. Musa-Achitara, ~2300 m a.s.l., 4.07.1986, K.M.; 2 ♂♂ (ISEA), Derbent, 20.05.1989, P. D.; 1 ♂ (ISEA), North Ossetia, Alaghir Distr., between Zinsar and Shubi, right bank of Ardon River, 21-23.06.1981, S.K. Alekseev. — UKRAINE: 3 ♂♂, 1 ♀ (ZISP), Crimea, Alupka, Mt. Krestovaya Gora, 3.05.1932, T. Reichard.

DISTRIBUTION. This trans-Eurasian temperate species has repeatedly been reported from Middle Asia, i.e. Turkmenistan: Firyuza [Kuznetsov & Fet, 1986], Badhkyz [Ovtsharenko & Fet, 1980], SW-Kopetdagh [Fet, 1983; Nenilin, 1984a], Ashghabad, Serakhs [Spassky & Luppova, 1945; Mikhailov & Fet, 1994], Bolshoi Balkhan Mt. Range and Sakka [Wesołowska, 1996]; Tajikistan: Sumbula [Spassky & Luppova, 1945], Kondara Canyon, Tigrovaya Balka, Ghissarskaya Valley, Hissar, Alaisky, Peter 1 and Zeravshansky Mt. ranges, Kshtut [Kharitonov, 1951: sub *P. c. haemorrhoicus*; Andreeva, 1975, 1976; Gafarov, 1987] and Obburdon [Nenilin, 1984a]; Kazakhstan: near Almaty, Taldy-Kurgan Area (Kapal) [Spassky & Shnitnikov, 1937; Tarabaev, 1979], Sary-Agach [Yakhontov, 1955], S-Kazakhstan Area (Temirchi and Kaplanbek) [Nenilin, 1984a], Ust-Kamenogorsk [Savelyeva, 1990], Karatau Mt. Range [Zyuzin et al., 1993] and Ustyurt Plateau [Zyuzin & Tarabaev, 1994]; Kyrghyzstan: Karabalty, near Bishkek, Cholpon-Ata, Kuturga, Bozteri, Tokmak, Dzhalalabad [Nenilin, 1984a,b], Fergansky and Chatkalsky Mt. ranges [Zonstein, 1984]; and Uzbekistan: Shakhrisyabz, Ugun, Ishkent, Zarmaz [Kharitonov, 1969: sub *P. c. haemorrhoicus*; Nenilin, 1984a], Samarkand Area (Agalyk, Kattaming, Khishrau, Kuhitangtau, Nurata), Tashkent Area (Aksak-Ata, Kamchik, Bosh-Kyzyl-Sai, Aurakh-

mat, Khodzhikent, Sidzhak, Dalverzin) and Dzhizak Area (Bakhmal) [Kroneberg, 1875: sub *P. haemorrhoica*; Kharitonov, 1932: sub *P. haemorrhoicus*; Arnoldi, 1947: sub *Phileus* (sic!) *c. haemorrhoicus*; Bronstein & Murtazaev, 1974; Nenilin, 1984a]. All localities of *Philaeus chrysops* in the Caucasus and Middle Asia are shown in Map 9.

*Phlegra* Simon, 1876

*Phlegra bresnieri* (Lucas, 1846)
Map 11.

Material. UZBEKISTAN: 1♀ (ISEA), Babatagh Mt. Range, Ak-Mechet, 28.04.1994, S.O.

DISTRIBUTION. This Euro-Middle Asian subboreal species is recorded in Middle Asia for the first time, with Babatagh as the easternmost locality (Map 11). Up to now, within the former USSR, the species has been reported only from Apsheron Peninsula, Azerbaijan [Dunin, 1979, 1984; Logunov, 1996].

*Phlegra cinereofasciata* (Simon, 1868)
Figs 37–42.

Material. KAZAKHSTAN: 1 ♀ (ISEA), Taldy-Kurgan Area, Gvardeisk Distr., 7 km E of Kospan, 18–20.06.1996, A.Z.

For other material studied see Logunov [1996: sub *P. fuscipes*, Form A].

Comparative material (syntypes of *Phlegra cinereofasciata*). 1 ♂, 1♀ (MNHN), "Pyr. orientales — Banyuls s/Mer 1914"; 2♂♂, 2 ♀♀ (MNHN), "Banyuls — 08".

DISTRIBUTION. This seems to be a S-European – Middle Asian species. Recently, one of us (DL) has recorded it in Middle Asia (Kazakhstan: Gheorghievka; and Kyrghyzstan: Sary-Dzhaz and Dzhilibulak) under the name *Phlegra fuscipes* (Form A) [Logunov, 1996] and has assumed that most probably these records, as well as those from the Caucasus, should belong to *P. cinereofasciata*. At present, after a re-examination of the syntypes of the latter species (Figs 37-42), we confirm Logunov's earlier assumption. So both *P. fuscipes* and *P. cinereofasciata* occur in Middle Asia.

*Plexippoides* Prószyński, 1984

*Plexippoides arkit* **sp.n.**
Figs 5–7, Map 12.

MATERIAL. Holotype ♀ (ISEA), Kyrghyzstan, Dzhalalabad Area, Sary-Chelek Reserve, Arkit, 2–5.05.1983, S.Z.

DIAGNOSIS. This species differs from all congeners known so far from the Asian part of Eurasia [Peng et al., 1993: figs. 606–624; Logunov, 1993b: fig. 7] by the widest and strongest entrance and the smallest terminal parts of the insemination ducts (Fig. 6).

DESCRIPTION. FEMALE. Measurements. Carapace 3.50 long, 2.50 wide, 1.00 high at PLE. Ocular area 1.50 long, 1.00 wide anteriorly and 1.10 wide posteriorly. Diameter of AME 0.60. Abdomen 3.50 long, 2.50 wide. Cheliceral length 1.25. Length of leg segments: leg I: 2.00 + 1.25 + 1.25 + 1.00 + 1.00; leg II: 1.75 + 1.00 + 1.25 + 0.85 + 0.85; leg III: 2.00 + 0.85 + 1.25 + 1.25 + 1.00; leg IV: 2.25 + 1.00 + 1.25 + 1.25 + 1.00. Leg spination. Leg I: Fm d.0-1-1-4; Pt pr.0-1-0; Tb pr.0-1, v.2-2-2ap.; Mt v.2-2ap. Leg II: Fm d.0-1-1-5; Pt pr.0-1-0; Tb pr.0-1, v.1-1-2ap.; Mt v.2-2ap. Leg III: Fm d.0-1-1-4; Pt pr. and rt.0-1-0; Tb pr. and rt.1-1-1; Mt d.2-2ap., pr. and rt.1ap., v.1-2ap. Leg IV: Fm d.0-1-1-2; Pt pr. and rt.0-1-0; Tb pr. and rt.1-1-1; Mt d.2-2-2ap., pr. and rt.1ap., v.1-2ap. Carapace brown, sparsely covered with white scales. Black arround eyes. Eye field additionally covered with black erect hairs. Clypeus densely clothed with white hairs. Chelicerae dark brown. Maxillae and labium brown. Sternum brown, with grey edges. Abdomen in poor condition (wrinkled): dorsum grey, with white patches, covered with black, orange and white scales. All legs brown, with numerous black patches, covered with grey and white hairs. Epigyne and spermathecae as in Figs 5–7.

DISTRIBUTION. The type locality only (Map 12).

ETYMOLOGY. The species epithet refers to the locus typicus, Village Arkit in Kyrghyzstan.

*Plexippoides flavescens* (O.P.-Cambridge, 1872)
Map 2.

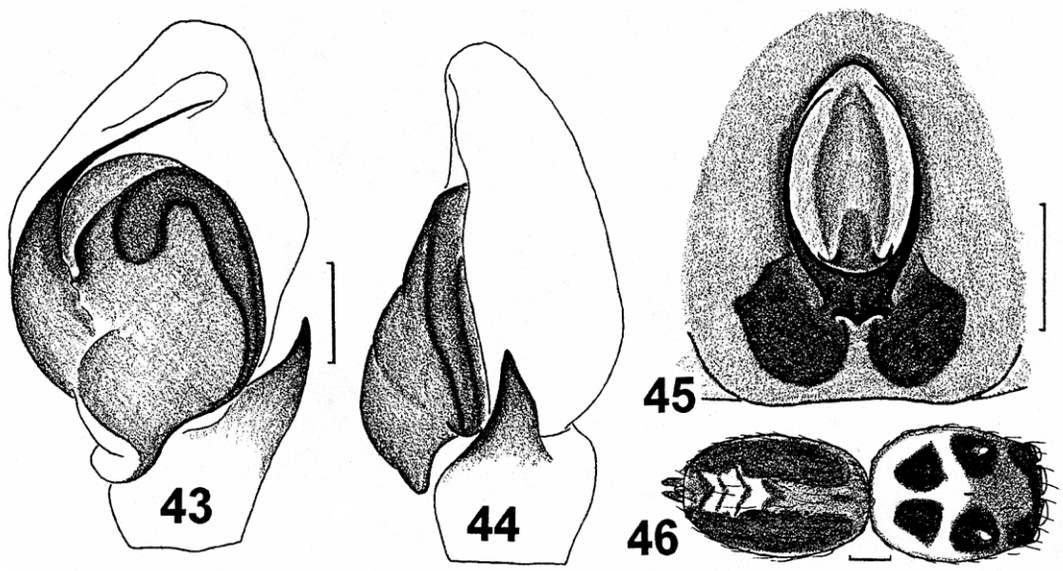
Material. KYRGHYZSTAN: 4 ♂♂ (ZMMU), near Bishkek, Aravan, 26.12.1965, coll. ?; 1♀ (ZMMU), Sanglok Mt. Range, near Sebistan, 7.05.1991, S.O. — TAJIKISTAN: 1 ♂ (ZMMU), Gandzhina, 17.03.1991, S.O.; 1 ♂ (ISEA), Gazimaylik Mt. Range, above Gandzhina, 1800 m a.s.l., 13.04.1991, S.O. — TURKMENISTAN: 4 ♂♂, 4 ♀♀ (ISEA), 1 ♂, 2 ♀♀ (SVO), SW-Kopetdagh, Garry-Gala [= Kara-Kala], 28–29.04.1993, D.L. & S.O.; 1 ♂ (ISEA), same locality, Aidere, 20.05.1982, B.P. Zakharov; 1 ♀ (ZMMU), Akhalsky Veloyat, date and coll. ?; 2 ♂♂, 1 ♀ (ISEA), Badhkyz, Kyzyl-Dzhar, 10-12.04.1993, A.Z.; 1♂, 1♀ (ISEA), 1♂, 3 ♀♀ (SVO), ca 40 km SE of Pulikhatum, Zulfagarsky Mt. Range, ~1000 m a.s.l., 13-14.04.1993, D.L.; 1 ♀ (ISEA), 20–25 km SE of Pulikhatum, Ghezghyadyk Mt. Range, 1000–1500 m a.s.l., 15–16.04.1993, D.L.; 1♂ (ZISP), Kuhitangtau Mt. Range, Bagly-Dara, 17.05.1983, coll. ? ; 1 ♂ (ZMMU), Terekshtau Mt. Range, Kumasan, 27.04.1991, S.O.; 1 ♂ (ZISP), Chardzhou, 5.05.1982, V.A. Krivokhatsky; 1 ♂ (ISEA), Mangyshlak Area, Ustyurt Plateau, Kenderly, 22.05.1981, A.Z. — UZBEKISTAN: 1♂ (SVO), Babatagh Mt. Range, Ak-Mechet, 3.05.1994, S.O.; 1 ♀ (ZISP), Surkhandarya Area, near Karatak (?), 1500–1800 m a.s.l., 28.04.1978, coll. ?

DISTRIBUTION. The species is currently known only from the Arabian Peninsula and Middle Asia [see Wesołowska, 1996]. In Middle Asia, this species has earlier been reported under the name *Plexippoides starmuehlneri* [Prószyński, 1976; Nenilin, 1984a, 1985]. Most of the localities of *P. flavescens* in Middle Asia are shown in Map 2.

*Plexippus* C.L. Koch, 1846

*Plexippus coccineus* Simon, 1902
Map 3.

Material. KAZAKHSTAN: 1♂ (AVG), Chimkent, 22.06.1993, A.G.; 1♀ (ISEA), Chimkent Area, ca 3 km S from Arys, 1.09.1992, D.L.; 1 ♀ (AVG), S-Kazakhstan Area, Kzylkumsky Distr., 1 km E of Khodzhatogai, 25.06.1993, A.G.; 1♂ (ISEA), same area, 55 km SW of Bairkum, Tabanbulak, Kyzylkumy desert, 24.05.1993, A.Z. — KYRGHYZSTAN: 2 ♀♀ (ZISP), Dzalal-Abad, 29.04.1982, S.Z. — TAJIKISTAN: 1 ♀ (ISEA), Kurgan-Tyube Area, Ilyichevsk Distr., Aktau Mt. Range, Gandzhina, ~800 m a.s.l., 19.06.1986, S.Z.; 1 ♀ (ZMMU), Garavuti, 06.1976, A.K.; 1 ♀ (ISEA), same locality, 23.05.1978, Chernenko. — TURKMENISTAN: 1 ♀ (ZISP), Ashghabad, 2.05.1984, A. Sakhchiev; 2 ♂♂, 2 ♀♀ (ISEA), same locality, 26.04.1993, S.O.; 1 ♀ (ZISP), Ustyurt Plateau, 6.06.1980, A.N.; 2 ♂♂ (ZMMU), Farab, 18.05.1929, V.S.; 2 ♀♀ (ISEA), SW-Kopetdagh, near Kara-Kala, 28.04.1993, D.L.; 1♂ (ZMMU), same




Figs 43–46. Genitalia of *Plexippus kondarensis* (from Vakhsh Valley): 43 — ♂ palp, ventral view; 44 — ditto, lateral view; 45 — epigyne; 46 — ♂ body colouration. Scales: 0.5 mm (43–45) and 1 mm (46).

Рис. 43–46. Гениталии *Plexippus kondarensis* (из долины р. Вахш): 43 — пальпа самца, вентрально; 44 — тоже, латерально; 45 — эпигина; 46 — окраска тела самца. Масштаб: 0,5 мм (43–45) и 1 мм (46).

locality, Parkhai, 10.07.1990, A.K. Galkin; 1 ♀ (ZISP), C-Kopetdagh, Firyuza, 25.07.1975, G.T. Kuznetsov; 3 ♂♂, 5 ♀♀ (ISEA), Kizil-Arvat, 10.03.1988, A.V. Abramov. — UZBEKISTAN: 2 ♂♂, 5♀♀ (ZISP), Tashkent, 05–09.1978-79, coll. ?; 1♀ (ISEA), Shakhrisyabz, Tankhadarya River, 26.04.1993, D.L.

Comparative material. AZERBAIJAN: 1 ♂, 1 ♀ (ISEA), Neftechaly Distr., Bank, Kura River, 1.06.1976, P.D.

DISTRIBUTION. This is a lowland Turan species, its westernmost locality being the Apsheron Peninsula [Dunin, 1979: sub *P. strandi*; Dunin & Mamedov, 1992; current data]. In Middle Asia, this form has repeatedly been reported under the name *P. strandi* from Turkmenistan: Ashghabad, Morgunovka, SW- and C-Kopetdagh, Badhkyz, Farab [Spassky, 1939; Ovtsharenko & Fet, 1980; Fet, 1983; Nenilin, 1984a; Kuznetsov & Fet, 1986; Mikhailov & Fet, 1994; Wesołowska, 1996: sub *P. setipes*] and Krasnovodsk [Prószyński, 1973: sub *P. setipes*]; Tajikistan: Tigrovaya Balka, Rokhati, Dushanbe [Andreeva, 1969, 1975, 1976; Nenilin, 1984a]; Kazakhstan: Kaplanbek [Nenilin, 1984a]; Uzbekistan: Samarkand, Andizhan, Tashkent, Dalverzin and Nurata [Spassky, 1939; Andreeva, 1976; Nenilin, 1984a]; and Kyrghyzstan: Fergansky Mt. Range (Changhet), Dzhalalabad [Nenilin, 1984b]. Most of the localities of *P. coccineus* in Middle Asia are shown in Map 3.

COMMENTS. Prószyński [1973] and some subsequent authors [Nenilin, 1984a, 1985; Mikhailov & Fet, 1994; Wesołowska, 1996] recorded *P. setipes* (Karsch, 1879) in Turkmenistan (Krasnovodsk and SW-Kopetdagh) and Azerbaijan (Lenkoran). These records are here recognized as actually belonging to *P. coccineus*. While re-examining the syntypes of *P. setipes* at the Berlin Museum [see Prószyński, 1973: figs 61-63], Prószyński also restudied two slides of the spermathecae labelled earlier by Dahl as *Menemeroides illigeri* (♀♀ collected from Krasnovodsk and Lenkoran) and he came to the conclusion that both slides also belong to *Plexippus setipes*. However, further investigations have shown that females of *P. setipes* and *P. coccineus* are indeed similar in spermathecal structure, but differ clearly in the appearance of the epigyne [cf. Bohdanowicz & Prószyński, 1987: fig. 231 and Wesołowska, 1996: fig. 26D], as well as in palpal structure of the male [cf. Bohdanowicz & Prószyński, 1987: fig. 229 and Wesołowska, 1996: fig. 25B]. Thus, it seems safe to assume that all records of *P. setipes* in Middle Asia and the Caucasus have been based on the misidentification of Dahl's slides and this species should be excluded from the Middle Asian salticid fauna.

### *Plexippus kondarensis* (Charitonov, 1951)
Figs 43–46, Map 3.

Material. KAZAKHSTAN: 1 ♀ (ISEA), S-Kazakhstan (= Chimkent) Area, Tyulkubas Distr., Aksu-Dzhabagly Reserve, date ?, E. Beseinov. — TAJIKISTAN: 1 ♂ (ISEA), Ramit, Sorbo River, 9.11.1990, S.V. Makarenkov; 1 ♂, 1 ♀ (IZW), Varzob Canyon, Kondara, 30.05.1969, E.M. Andreeva.

DISTRIBUTION. Tajikistan and S-Kazakhstan (see Map 3). In Middle Asia, it has hitherto been reported only from Tajikistan: Kondara, Pass Varzob, Ramit, Kvak [Kharitonov, 1951: sub *Hissarinus k.*; Andreeva, 1969, 1976; Nenilin, 1984a, 1985]. All localities of *Plexippus kondarensis* in Middle Asia are shown in Map 3.

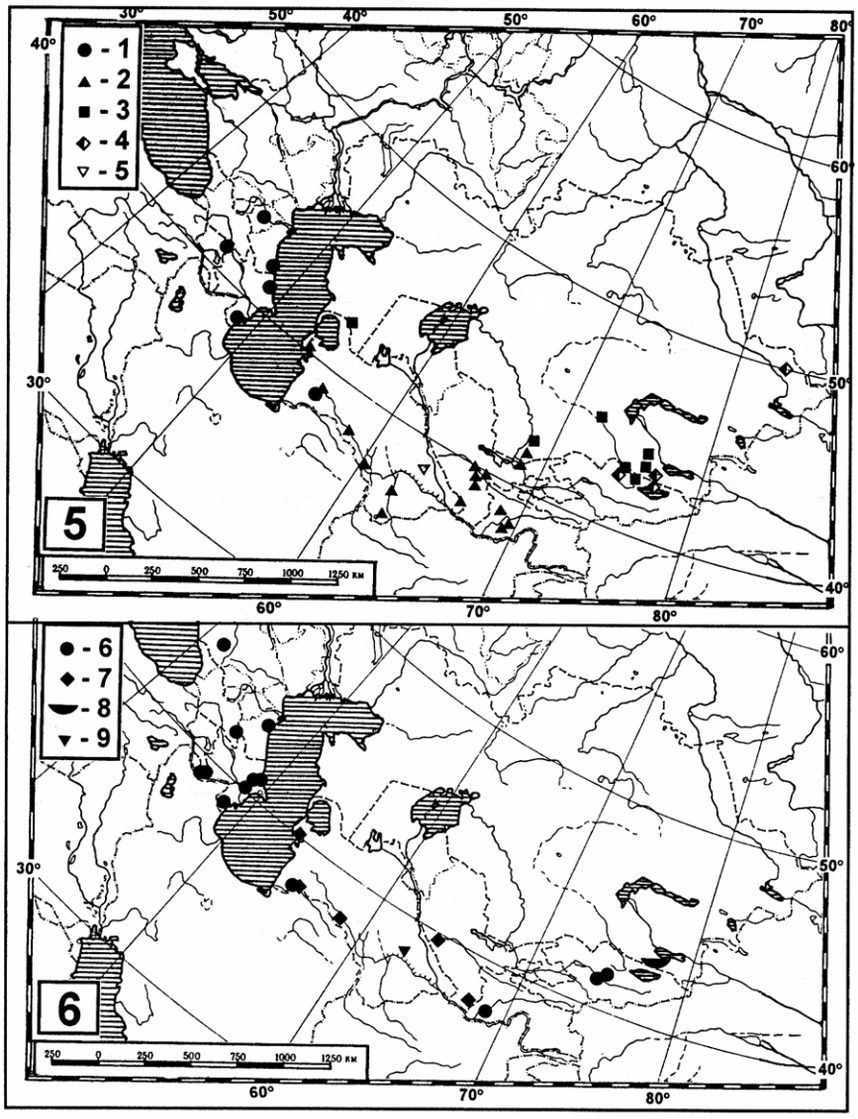
## *Proszynskiana* Logunov, 1996

### *Proszynskiana aeluriforma* **sp.n.**
Figs 51–54, Map 12.

MATERIAL. Holotype ♂ (ISEA), S-Uzbekistan, Babatagh Mt. Range, Ak-Mechet, 3.05.1994, S.O.

Paratype: 1 ♂ (ZMMU), together with holotype.

DIAGNOSIS. Easily separated from other *Proszynskiana* species by the uncommon structure of the embolus (Figs 53, 54), which is very similar to that of *Aelurillus* species.




Maps 5-6. Localities of *Ballus chalybeius* (6), *Icius flavipes* (9), *Langona pallidula* sp.n. (5), *L. tartarica* (2), *Macaroeris nidicolens* (1), *Marpissa pomatia* (4), *Ptocasius variegatus* (8), *Sitticus nenilini* (3) and *Thyene imperialis* (7) in Middle Asia and the Caucasus.

Карты 5-6. Местообитания *Ballus chalybeius* (6), *Icius flavipes* (9), *Langona pallidula* sp.n. (5), *L. tartarica* (2), *Macaroeris nidicolens* (1), *Marpissa pomatia* (4), *Ptocasius variegatus* (8), *Sitticus nenilini* (3) и *Thyene imperialis* (7) в Средней Азии и на Кавказе.

DESCRIPTION. MALE. Measurements. Carapace 2.00 long, 1.30 wide, 1.00 high at PLE. Ocular area 1.00 long, 1.00 wide anteriorly and 0.95 wide posteriorly. Diameter of AME 0.50. Abdomen 1.90 long, 1.25 wide. Chelicceral length 0.50. Length of leg segments: leg I: 1.00 + 0.50 + 0.75 + 0.50 + 0.58; leg II: 1.00 + 0.50 + 0.75 + 0.50 + 0.50; leg III: 1.00 + 0.63 + 0.75 + 0.88 + 0.75; leg IV: 1.13 + 0.58 + 0.88 + 0.88 + 0.75. Leg spination. Leg I: Fm d.1-1-2; Pt pr. and rt.0-1-0; Tb pr. and rt.1-1-1, v.2ap.; Mt pr. and rt.2-2ap. Leg II: Fm d.1-1-5; Pt pr. and rt.0-1-0; Tb pr. and rt.1-1-1, v.2ap.; Mt pr. and rt.2-2ap. Leg III: Fm d.1-1-4, pr.0-1-1; Pt pr. and rt.0-1-0; Tb d.1-0-0, pr. and rt.1-1-1, v.1-0; Mt d.1ap., pr.1-2ap., rt.2-1-2ap., v.1-1ap. Leg IV: Fm d.1-1-3; Pt pr. and rt.0-1-0; Tb d.1-0-0, pr. and rt.1-1-1, v.1-0; Mt d.1ap., pr. and rt.1-1-2ap., v.1-0-2ap. Colouration. Carapace and eyes field black, densely covered with white scales. Clypeus black, covered with white hairs and scales. Chelicerae dark brown. Maxillae and labium grey. Sternum dark, covered with white hairs. Dorsum grey, covered anteriorly with irridescent scales. A brown scutum visible on fore part of dorsum. Leg I orange, but ventral side of femora brown and covered with black hairs. Remaining legs orange, with irregular light spots. Palpal structure as in Figs 51–54.

DISTRIBUTION. The type locality only (Map 12).

ETYMOLOGY. The species is named so, because its embolus (Fig. 54) looks like that of *Aelurillus* species.

### *Proszynskiana starobogatovi* Logunov, 1996

Material. TAJIKISTAN: 7♂♂, 2 ♀♀ (ISEA), 1 ♂, 1 ♀ (ZMMU), Kurgan-Tyube Area, Aruktau Mt. Range, Gandzhina, 19–20.04. 1991, S.O.

COMMENTS. This record of *P. starobogatovi* is again from its type locality [see Logunov, 1996].

### *Proszynskiana* sp.
Figs 82, 83.

Material. TAJIKISTAN: 1 ♀ (ISEA), Kurgan-Tyube Area, Dzhilikul Distr., Gandzhina, 28.04.1986, A.Z.

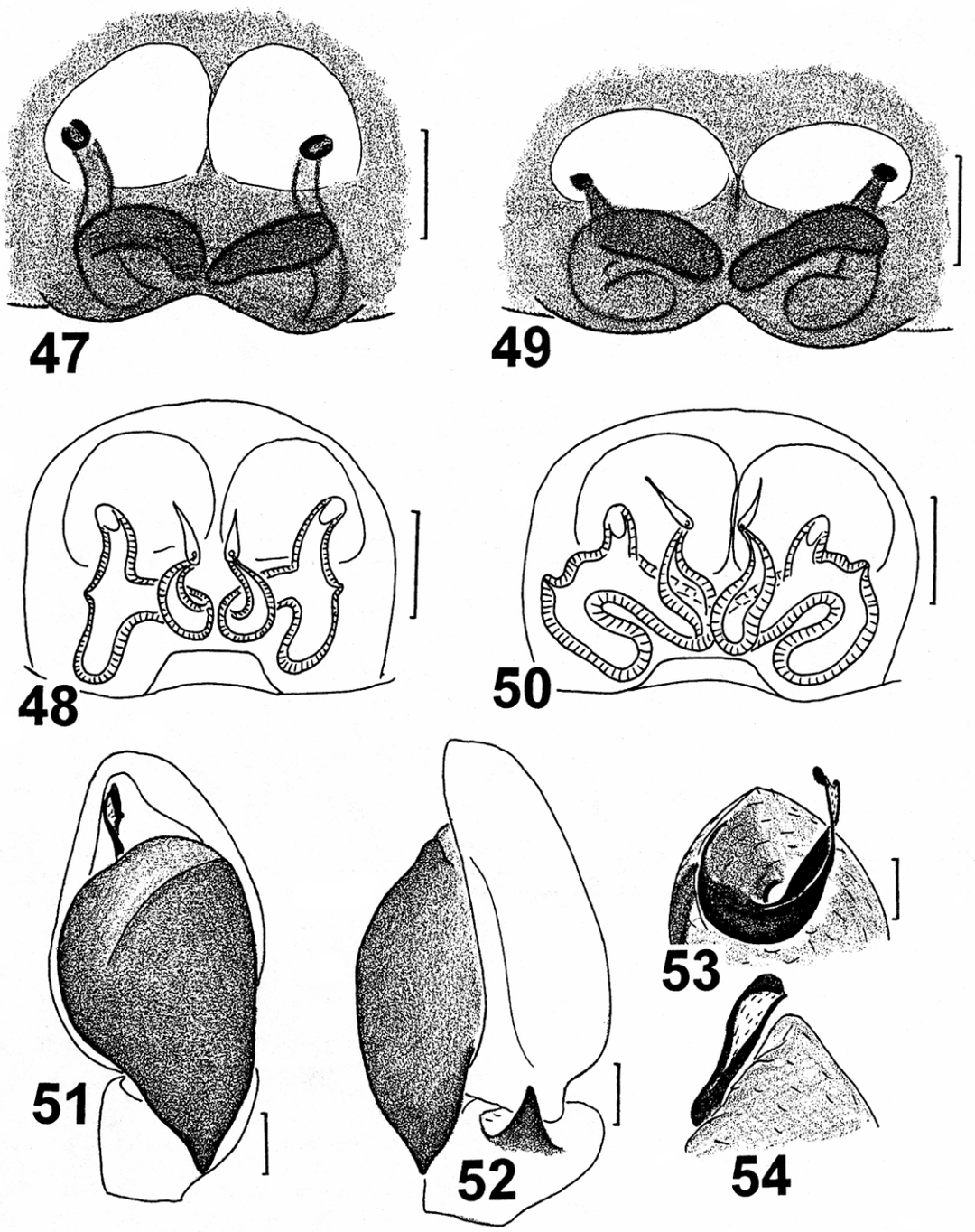
COMMENTS. This species was collected from the same locality as *P. starobogatovi* (see above) but its epigyne is quite different from that of the latter species [cf. Figs 82, 83 and Logunov, 1996: figs 51, 52]. It is very likely that we face a new species. Males are required to solve the problem.

### *Pseudicius* Simon, 1885

### *Pseudicius afghanicus* (Andreeva, Hęciak & Prószyński, 1984)

Material. UZBEKISTAN: 1♀ (ISEA), Babatagh Mt. Range, Ak-Mechet, 25.04.1994, S.O.; 3 ♂♂, 1 ♀ (ISEA), Tashkent Area, Dalverzin, 29.06.1980, A.N. — KAZAKHSTAN: 1 ♀ (ISEA), Almaty Area, Zhambyl Distr., Fabrichny, 29.04–1.05.1995, A.Z.

DISTRIBUTION. *P. afghanicus* has been described and reported solely from Afghanistan [Andreeva et al., 1984]. However, a record of *P. cinctus* (O.P.-Cambridge, 1885) from China (Xinjiang) [Zhou & Song, 1988: fig. 10]

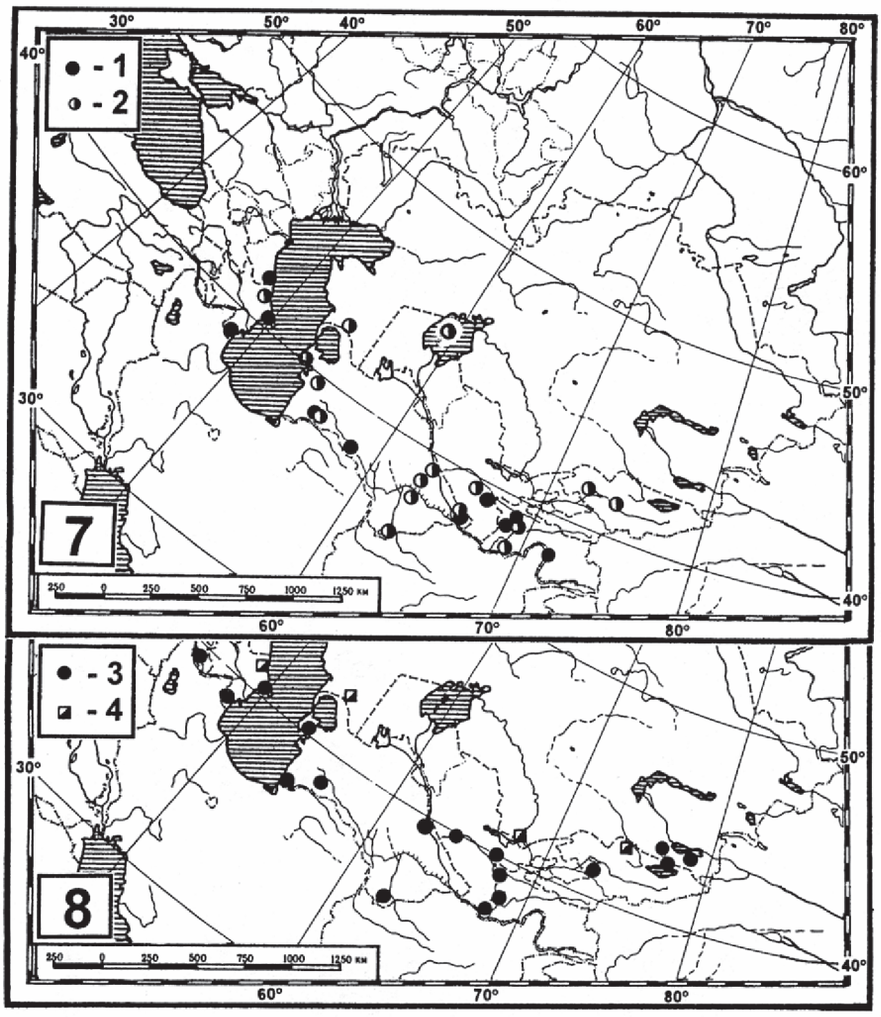



Figs 47–54. Genitalia of *Sitticus barsakelmes* sp.n. (holotype) (47, 48), *S. kazakhstanicus* (paratype) (49, 50) and *Proszynskiana aeluriforma* sp.n. (holotype) (51–54): 47, 49 — epigyne; 48, 50 — spermathecae; 51, 52 — ♂ palp, ventral and lateral views; 53, 54 — embolus, dorsal and ventral views. Scale: 0.1 mm.

Рис. 47–54. Гениталии *Sitticus barsakelmes* sp.n. (holotype) (47, 48), *S. kazakhstanicus* (paratype) (49, 50) и *Proszynskiana aeluriforma* sp.n. (holotype) (51–54): 47, 49 — эпигина; 48, 50 — сперматека; 51, 52 — пальпа самца, вентрально и латерально; 53, 54 — эмболюс, дорсально и вентрально. Масштаб: 0,1 мм.

seems to actually belong to *P. afghanicus* as well, even if we consider both species as valid (see below). Hence, the above is the first discovery of *P. afghanicus* in Middle Asia.

COMMENTS. We have only three females at hand which do seem to belong to *P. afghanicus*, while the above three males of presumably this species show no differences from those of *P. cinctus*. Besides this, it has been impossible to separate males of both species using even the original description of the former taxon [Andreeva et al., 1984]. So it is very likely that *P. afghanicus* can prove to be only a distinctive morph of *P. cinctus*. The problem reqires a special study in the future.




Maps 7–8. Localities of *Cyrba algerina* (1), *C. ocellata* (2), *Marpissa nivoyi* (4) and *Salticus tricinctus* (3) in Middle Asia and the Caucasus.

Карты 7–8. Местообитания *Cyrba algerina* (1), *C. ocellata* (2), *Marpissa nivoyi* (4) и *Salticus tricinctus* (3) в Средней Азии и на Кавказе.

## *Pseudicius cinctus* (O.P.-Cambridge, 1885) Map 10.

Material. KAZAKHSTAN: 1♀ (ISEA), near Almaty, 1.04.1996, A.G.; 1 ♂ (ISEA), Almaty Area, Chilik Distr., Naryn Canyon, 29.05.1991, A.Z.; 2♂♂ (ISEA), same area and distr., 157th road-km between Almaty and Narynkol, Mt. Syugaty, Chelik-Kokpek, 22.04.1990, C.K. Tarabaev & A.F.; 1♀ (ISEA), Kyzyl-Kum Desert, ca 37 km SW Bayrkum, Syr-Darya River bank, date ?, A. Z.; 1♀ (ISEA), S-Kazakhstan [= Chimkent] Area, Tulebaevo Distr., 30-35 km E of Chimkent, Gheorghievka, Sairam-Su River canyon, 09.1992, D.L.; 1 ♂ (ISEA), same area, Arys, summer 1990, D.L.; 2♀♀ (ISEA), same locality, 4.05–6.09.1988, D.L.; 1♂ (ISEA), same locality, 8.09.1991, D.L.; 1 ♀ (ISEA), same area, ca 37 km WSW of Bairkum, Baimarkhan, 10–11.05.1995, A.Z.; 1 ♂, 2♀♀ (ISEA), Zhambyl [= Dzhambul] Area, Chu Distr., 9th road-km between Novotroitskoe and Muyunkum, 31.05–2.06.1990, A.F. & A.Z.; 1 ♀ (ZMMU), same area, Sarysu Distr., ca 76 km NE of Ulanbel, Betpak-Dala Desert, 5.06.1990, A.F. & A.Z.; 1♀ (ISEA), same area, Gheorghievka, 24.04.1984, S.O. — KYRGHYZSTAN: 1♀ (ZISP), N bank of Lake Issyk-Kul, Cholpon-Ata, date ?, S.Z.; 1 ♂, 2 ♀♀ (ISEA), 1♀ (ZMMU), Talasskaya Area, Toktogul Distr., ca 25 km NE of Kara-Kul, 1500 m a.s.l., Pass Kek-Bel, 27.06.1992, A.Z.; 2 ♂♂ (ZMMU), Chu River canyon, Bishkek, 21.10.1984, S.O.; 2 ♂♂, 1♀ (ISEA), 1♂, 1♀ (SVO), same locality, Nizhnechuysk, 20. 10.1984, S.O.; 1♀ (ZISP), foothills of Kirghizsky Mt. Range, Chon-Aryk, 27.03.1987, S.O.; 19♂♂, 2 ♀♀ (ZMMU), Osh Area, Isfany, Beles, 1.04.1981, S.N. Rybin; 1♂ (ZMMU), Kurachinsky Mt. Range, Kemchi-Say, 10.04.1987, S.O. — TAJIKISTAN: 3♂♂, 1♀ (ZMMU), Pass Varzob, 12.09. 1948, E. Luppova; — UZBEKISTAN: 1♂ (SVO), Guran, 16.05. 1994, S.O.; 1♂ (ISEA), Tashkent, 18.09.1989, D.L.; 1 ♀ (ZMMU), same locality, 6.09.1991, E.E. Koptykbaev & A.Z.; 1♂, 4♀♀ (ZISP), Chirchik River, Tuzel, Ingheldy, summers 1977, 1979, A.N.; 1 ♂ (ZMMU), Samarkand Area, Dzham, 8.06.1991, A.Z.

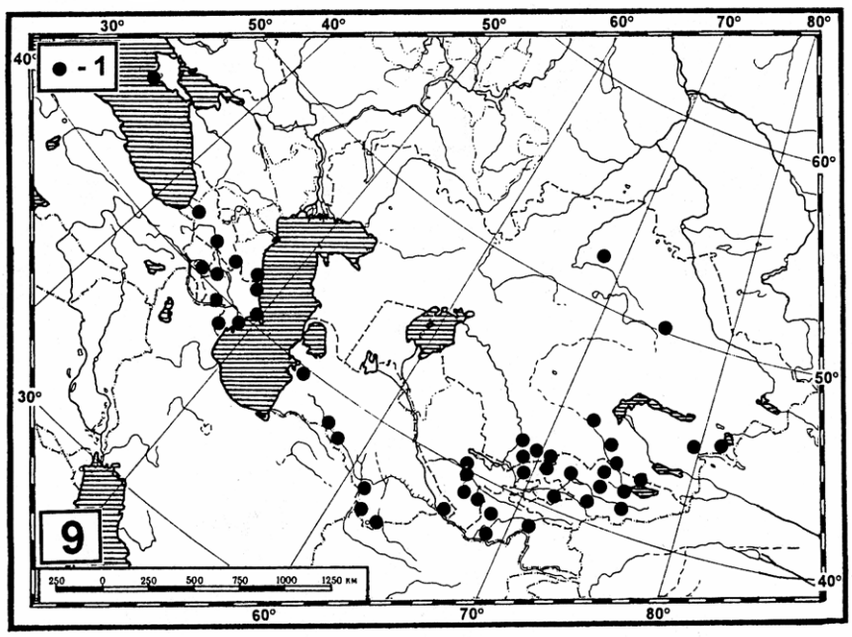
DISTRIBUTION. The species has been recorded in Afghanistan, China (Kashgar) and Middle Asia. The records from China (Xinjiang) [Zhou & Song, 1988: fig. 10; Hu & Wu, 1989: figs 293, 294] seem to actually belong to *P. afghanicus* (see above). In Middle Asia, this species has repeatedly been reported under different names from Kyrghyzstan: Cholpon-Ata, Chu River Valley (Bishkek and Koi-Tash), Fergansky Mt. Range [Nenilin, 1984b, c, 1985]; Turkmenistan: Sary-Yazy [Simon, 1889, 1899, both sub *P. vittatus*], SW- and C-Kopetdagh [Fet, 1983; Fet & Kuznetsov, 1982], Badhkyz, Repetek, Murghab [Spassky, 1952: sub *P. rufovittatus*; Kamalov, 1977; Prószyński, 1979: sub *P. rufovittatus*; Ovtsharenko & Fet, 1980: sub *P. vittatus*; Mikhailov & Fet, 1994], Krasnovodsk [Nenilin, 1984c]; Tajikistan: Muminabad [Spassky, 1952: sub *P. rufovittatus*], Beshkentskay Valley, Kondara, Dushanbe and Khorog [Andreeva, 1975, 1976, both sub *P. rufovittatus*; Andreeva et al., 1984: sub *Icius c.*; Gafarov, 1987]; and Uzbekistan: Shakhrisyabz [Kharitonov, 1969: *P. rufovittatus*], Samarkand, Andizhan, Tashkent, Dalverzin, Chinaz, Chinghildy, Chimgan, Tuzel, Kibrai, Nurata, Lake Zatkhan [Spassky, 1952: sub *P. rufovittatus*; Yakhontov, 1956: sub *P. rufovittatus*; Nenilin, 1984a: sub *P. vittatus*, 1984c]. Most of the localities of *P. cinctus* in Middle Asia are shown in Map 10.

## *Pseudicius courtauldi* Bristowe, 1935 Map 10.

Material. KAZAKHSTAN: 1 ♂ (ZMMU), Kapchagai, 2.07. 1995, Y.M.; 2 ♂♂, 3 ♀♀ (ISEA), Almaty Area, Talgarsky Distr., 17–18 km E of Kapchagai, 27.08. 1992, Y.M. & D.L. — KYRGHYZSTAN: 1♂ (ISEA), Dzhalalabad Area, Dzhany-Dzhal Distr., near Tash-Kumyr, 15.06.1992, A. F. & A.Z.; 1 ♀ (ZISP),

Aravan, 4.03.1979, coll. ?.; 1 ♂ (ISEA), Toktogul Distr., NE of Kara-Kul, Kek-Bel, 27-28.06.1992, A.F. & A.Z.; 1 ♀ (ZMMU), near Osh, 17.01.1982, S.N. Rybin. — TURKMENISTAN: 1 ♀ (ISEA), Kara-Belent Mt., 10–16.04.1991, V.D. — UZBEKISTAN: 3 ♂♂ (SVO), Surkhandarya Area, Babatagh Mt. Range, Ak-Mechet, 3.05. 1994, S.O.; 1 ♂ (ISEA), same area, Babatagh Mt. Range, 40–47 km SE of Denau, 5–13.05.1994, A.Z.

DISTRIBUTION. The species is distributed from Turkey in the west to the western provinces of China in the east [Logunov, 1993a]. In Middle Asia, this species has hitherto been recorded in Kyrghyzstan: Osh Area, Karamdzhan, Fergansky Mt. Range [Nenilin, 1985; Logunov, 1993a], near Bishkek (Suzakskie Adyry), Khodzha-Ata river [Nenilin, 1984b; Logunov, 1993a]; Tajikistan: Varzob Valley, Kondara [Andreeva et al., 1984: sub *Icius c.*], Khorog [Logunov, 1993a]; Uzbekistan: Karakalpakia, Tashkent Area [Nenilin, 1985; Logunov, 1993a]; Turkmenistan: Amudaryinsky Reserve (Kabakly) [Wesołowska, 1996]; and Kazakhstan: Kapchagai [Logunov, 1993a]. Most of the localities of *Pseudicius courtauldi* in Middle Asia are shown in Map 10.




Map 9. Localities of *Philaeus chrysops* (1) in Middle Asia and the Caucasus.
Карта 9. Местообитания *Philaeus chrysops* (1) в Средней Азии и на Кавказе.

## *Pseudicius spasskyi* (Andreeva, Hęciak & Prószyński, 1984)

Map 10.

Material. TAJIKISTAN: 11 ♂♂, 3 ♀♀ (ISEA), Khatlon Area, Kuibyshev Distr., Vakhsh River canyon, 10.1988, A.K.; 3 ♀♀ (ZISP), near Dushanbe, date ?, N. Poltchaninova; 2 ♂♂, 1 ♀ (ZISP), Voroshilovobad Distr., Vakhsh, 20.07.1947, E. Luppova. — TURKMENISTAN: 1 ♂ (SVO), SW-Kopetdagh, Kara-Kala, 29.03.1993, S.O.; 1 ♀ (ZISP), same locality, Aidere, 12.06.1981, V.Ya. Fet; 1 ♀ (ZISP), Kuhitangtau Mt. Range, Kampyr-Tepa, 19.09.1983, A.N.; 1 ♂, 1 ♀ (SVO), Ashghabad, 26.03.1994, S.O.; 5 ♂♂, 6 ♀♀ (ISEA), same locality, 26.03–6.04.1993, D.L.; 1 ♀ (ZMMU), Kyzyl-Su, 28.05.1929, V.S.; 1 ♂ (ZISP), Repetek, 25.04.1982, V.A. Krivokhatsky; 3 ♂♂, 1 ♀ (ZMMU), Krasnovodsk, 19.01.1982, K.M. — UZBEKISTAN: 1 ♀ (SVO), Samarkand Area, Sovetobad Distr., Zeravshansky Mt. Range, Pass Aman-Kutan, 27.04.1993, S.O.; 1 ♂ (ISEA), same area and distr., ca 2.5 km below Dzham, 8.06.1991, E.E. Koptykbaev & A.Z.; 1 ♀ (ISEA), same area and distr., Ulus, 7.05.1990, A.F. & A.Z.; 3 ♀♀ (ZMMU), Babatagh Mt. Range, Ak-Mechet, 25.05.1994, S.O.; 1 ♀ (ZMMU), Surkhandarya Area, near Derbent, 05.1994, O.V. Lyakhov; 1 ♀ (ISEA), same area, 2 km W of Derbent, 15.05.1994, A.Z.; 3 ♂♂, 3 ♀♀ (SVO), Bukhara Area, ca 20 km S of Kagan, 19.05.1994, S.O.; 1 ♂, 4 ♀♀ (ISEA), same area, ca 28 km S of Alat, 24.04.1993, D.L.

Comparative material. AZERBAIJAN: 1 ♀ (ISEA), Apsheron Penisula, Zykh, 20.05.1976, P.D.

DISTRIBUTION. Up to now, *P. spasskyi* has been reported from Middle Asia only, i.e. Turkmenistan: Krasnovodsk, Murghab [Andreeva et all., 1984; Mikhailov & Fet, 1994], Kabakly, Farab, near Kara-Kala [Wesołowska, 1996]; and Tajikistan: Tigrovaya Balka, Dushanbe [Andreeva et al., 1984: sub *Icius s.*]. Most of the localities of *Pseudicius spasskyi* in Middle Asia are shown in Map 10.

## *Ptocasius* Simon, 1885

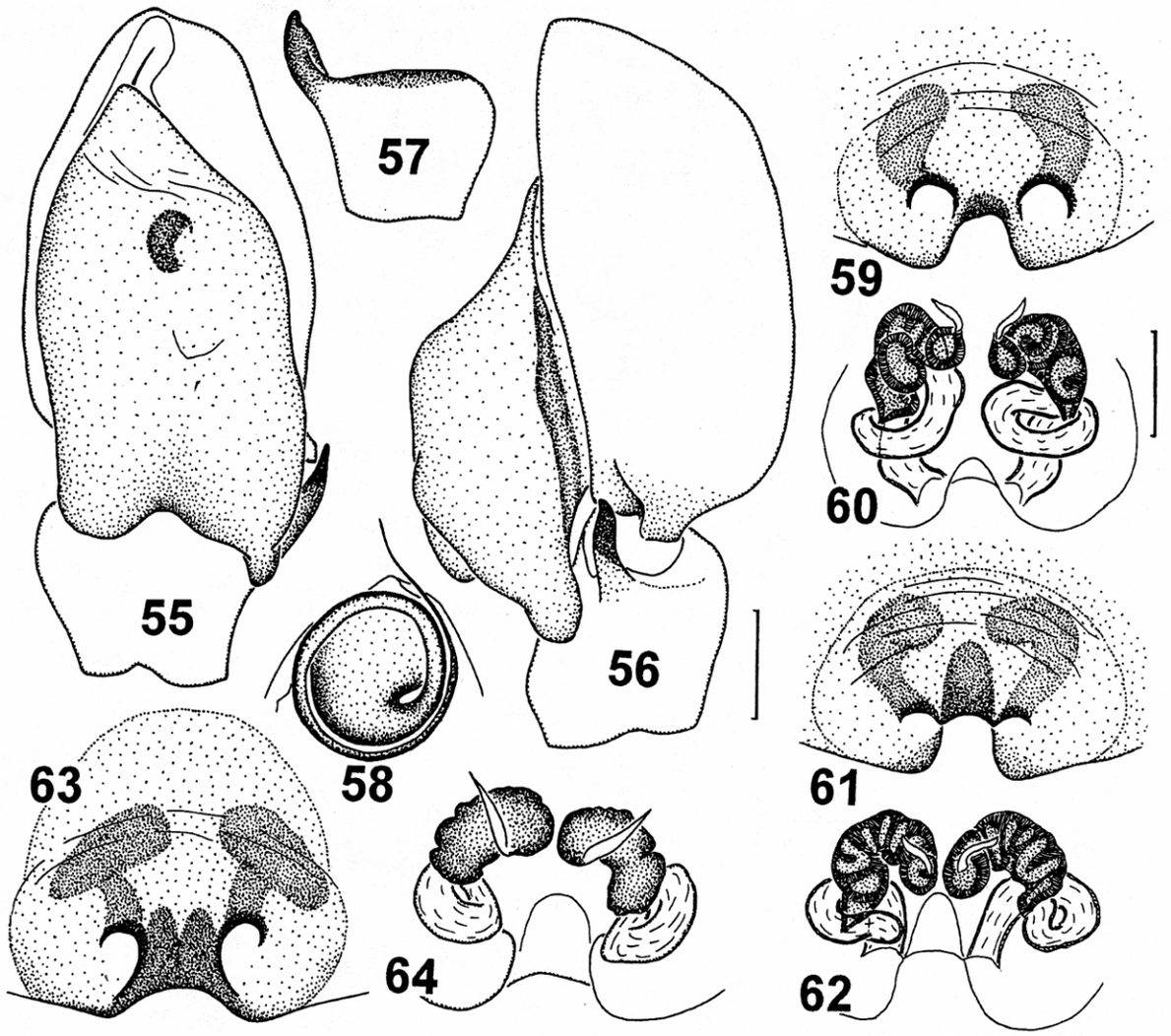
### *Ptocasius variegatus* Logunov, 1995

Figs 10, 11, Map 6.

Material. KAZAKHSTAN: 1 ♂ (ISEA), Almatinsky Reserve, Talgar, 13.08.1986, A.B. Abramov.

DIAGNOSIS. In the original description [Logunov, 1995], one of us (DL) noted that the species was close to *Yaginumaella tenzingi*, the latter taxon known from the Nepal Himalayas. The present examination of the male of *Ptocasius variegatus* confirms this idea [cf. Figs 10, 11 and Żabka, 1980: figs 2, 4, 6, 8]. Besides that, *P. variegatus*, especially males, is very similar to *Yaginumaella wuermlii* Żabka, 1981 from Bhutan [see Żabka, 1981: figs. 52, 53, 56–59], but its males differ in the narrower tegulum and the females in having longitudinal rather than transverse slits of the copulatory openings.

DESCRIPTION. MALE. Measurements. Carapace 2.50 long, 1.85 wide, 1.25 high at PLE. Ocular area 1.13 long, 1.75 wide anteriorly and 1.63 wide posteriorly. Diameter of AME 0.38. Abdomen 3.00 long, 1.05 wide. Cheliceral length 0.75. Clypeal height 0.25. Length of leg segments: leg I: 1.50 + 0.80 + 1.10 + 1.00 + 1.00; leg II: 1.50 + 0.75 + 1.00 + 0.75 + 0.75; leg III: 1.63 + 0.75 + 1.00 + 1.00 + 1.00; leg IV: 1.50 + 0.63 + 1.13 + 1.25 + 1.00. Leg spination. Leg I: Fm d.0-1-1-3; Tb pr.0-0-1, v.2-0-2-2ap.; Mt v.2-2ap. Leg II: Fm d.0-1-1-4; Pt pr.0-1-0; Tb pr.0-0-1, v.1-2-2ap.; Mt pr.1ap., v.2-2ap. Leg III: Fm d.0-1-1-4; Pt pr. and rt.0-1-0; Tb pr. and rt.1-1, v. 0-1-2ap.; Mt d. 2-2ap., pr. and rt.1ap., v.1-2ap. Leg IV: Fm d. 0-1-1-3; Pt pr. and rt.0-1-0; Tb pr.1-1, rt.1-1-1, v.1-0-2ap.; Mt d.1-2-2ap., pr. and rt.1ap., v.2ap. Colouration. Carapace brown. Eyes field orange, with black around eyes. Eye field and carapace anteriorly densely covered with white scales.




Figs 55–64. Genitalia of *Rafalus variegatus* (specimens from Uzbekistan): 55, 56 — ♂ palp, ventral and lateral views; 57 — ♂ tibial apophysis, rear view; 58 — embolus, dorsal view; 59, 61, 63 — epigyne, variation; 60, 62, 64 — spermathecae, variation. Scale: 0.2 mm.

Рис. 55–64. Гениталии *Rafalus variegatus* (экземпляры из Узбекистана): 55, 56 — пальпа самца, вентрально и латерально; 57 — тибиальный отросток, сзади; 58 — эмболюс, дорсально; 59, 61, 63 — эпигина, изменчивость; 60, 62, 64 — сперматека, изменчивость. Масштаб: 0,2 мм.

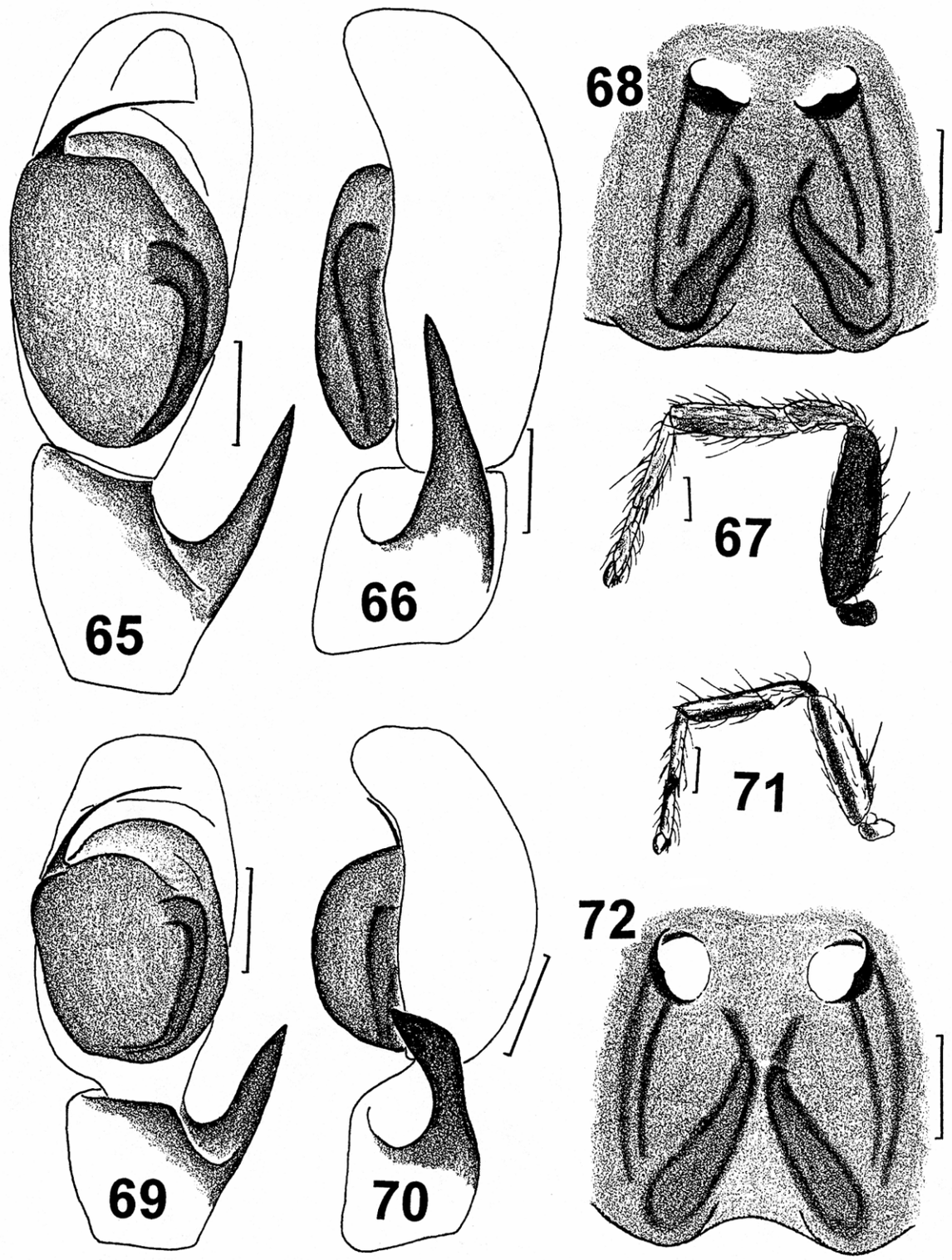
Sides of carapace covered with orange scales. Clypeus orange. Chelicerae, labium and maxillae brown, with orange apices. Sternum yellow, with brown edges. Dorsum grey, with an anterior yellow lanceolate spot typical for *Ptocasius* species. Venter grey-yellow. Legs I orange, with brown femora. Other legs yellow with dark distal rings on segments. Palpal structure as in Figs 10,11.

DISTRIBUTION. SE-Kazakhstan only [see Logunov, 1995] (Map 6).

*Rafalus* Prószyński, 1997

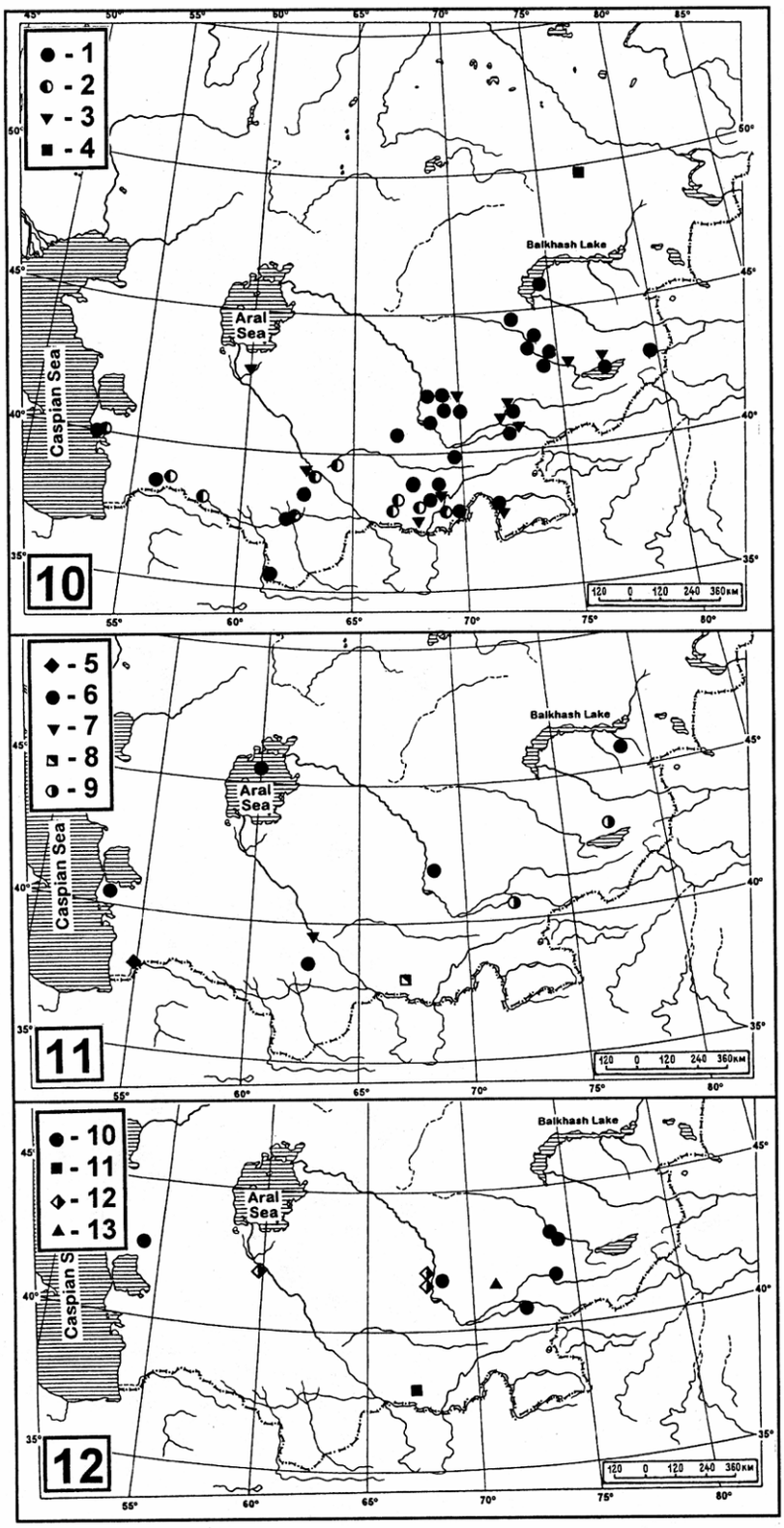
*Rafalus variegatus* (Kroneberg, 1875)
Figs 55–64, Map 1.

Material. UZBEKISTAN: 1 ♂, 1 ♀ (syntypes of *Aelurops v.*, ZMMU, Ta-1050), Samarkand Area: Khodzhaduk, coll. Fedtschenko; 1♀, (syntype of *Aelurops v.*, ZMMU, Ta-1049), Samarkand, coll. Fedtschenko; 1♀ (ZMMU), same locality, Afrosiab, 2.05.1929, V.S.; 1 ♂ (ISEA), Sovetabad Distr., Zeravshansky Mt. Range, ca 2.5 km from Dzham, 3.06.1991, A.Z.; 4 ♂♂, 1 ♀, (ISEA), same locality, Ulus, 1.05.1986, A.Z.; 3♂♂, 1♀ (ZMMU), Bukhara, 04–05 1988, P.P. Vtorov; 2 ♂♂ (ISEA), same locality, 05.1980, R.I. Zlotin; 3 ♂♂, 1 ♀ (ISEA) same area, ca 20 km S of Kagan, Dzheiranii Pitomnik, 19.05.1990, S.O.; 1 ♂ (ISEA), same locality, 19.05.1994, A.Z.; 2 ♂♂ (ISEA), Dzhizak Area, mountains between Saikhan and Bakhmal, highway Tashkent-Samarkand, 5.05.1990, A.Z. & A.F.; 1 ♂, (ISEA), Surkhandarya Area, Baglydara Canyon, 19–22.05.1992, A.Z.; 1♂ (AVG), same area, Babatagh Mt. Range, 5 km W of Ak-Mechet, 18.04–6.05.1994, A.G.; 1 ♂, 4 ♀♀ (ISEA), same area and range, 40–47 km SE of Denau, 5–13.05.1994, A.Z.; 1 ♀ (AVG), 3 ♀♀ (ISEA), 2 km W of Derbent, 15.04–15.05.1994, A.Z. & A.G.; 1 ♂ (AVG), 2 km W of Yangikishlak, 15.05.1994, A.G.; 1 ♂ (ISEA), Navoi Area, 100 km NE of Zaravshan, Tokhantau Mts., 25.05.1994, A.Z.; 1♂, 1♀ (ISEA), Kashkadarya Area, 50 km SE oof Guzar, 15.05.1994, A.Z. — KAZAKHSTAN: 2 ♂♂, 1 ♀ (ISEA), Zhambyl [= Dzhambul] Area: Moynkumsky Distr., ca 6 km NE of Khantau Station, foothills of Khantau Mts., 23.05.1991, A.Z.; 3 ♂♂, 2♀♀ (ISEA), same locality, ca 6 km SE of Khantau, 11.06.1990, A.Z. & A.F.; 1 ♂ (ISEA), ca 21 km NW of Akbakai, Betpak-Dala




Figs 65–72. Genitalia of *Salticus turkmenicus* sp.n. (♂ holotype, ♀ paratype) (65–68) and *S. dzhungaricus* (♂ from Arys, ♀ from Barsakelmes) (69–72): 65, 69 — ♂ palp, ventral view; 66, 70 — ditto, lateral view; 68, 72 — epigyne; 67, 71 — ♂ first leg colouration. Scales: 0.1 mm (65, 66, 68–70, 72) and 0.25 mm (67, 71).

Рис. 65–72. Гениталии *Salticus turkmenicus* sp.n. (♂ holotype, ♀ paratype) (65–68) и *S. dzhungaricus* (♂ из Арыси, ♀ с Барсакельмеса) (69–72): 65, 69 — пальпа самца, вентрально; 66, 70 — тоже, латерально; 68, 72 — эпигина; 67, 71 — окраска первой ноги самца. Масштаб: 0,1 мм (65, 66, 68–70, 72) и 0,25 мм (67, 71).



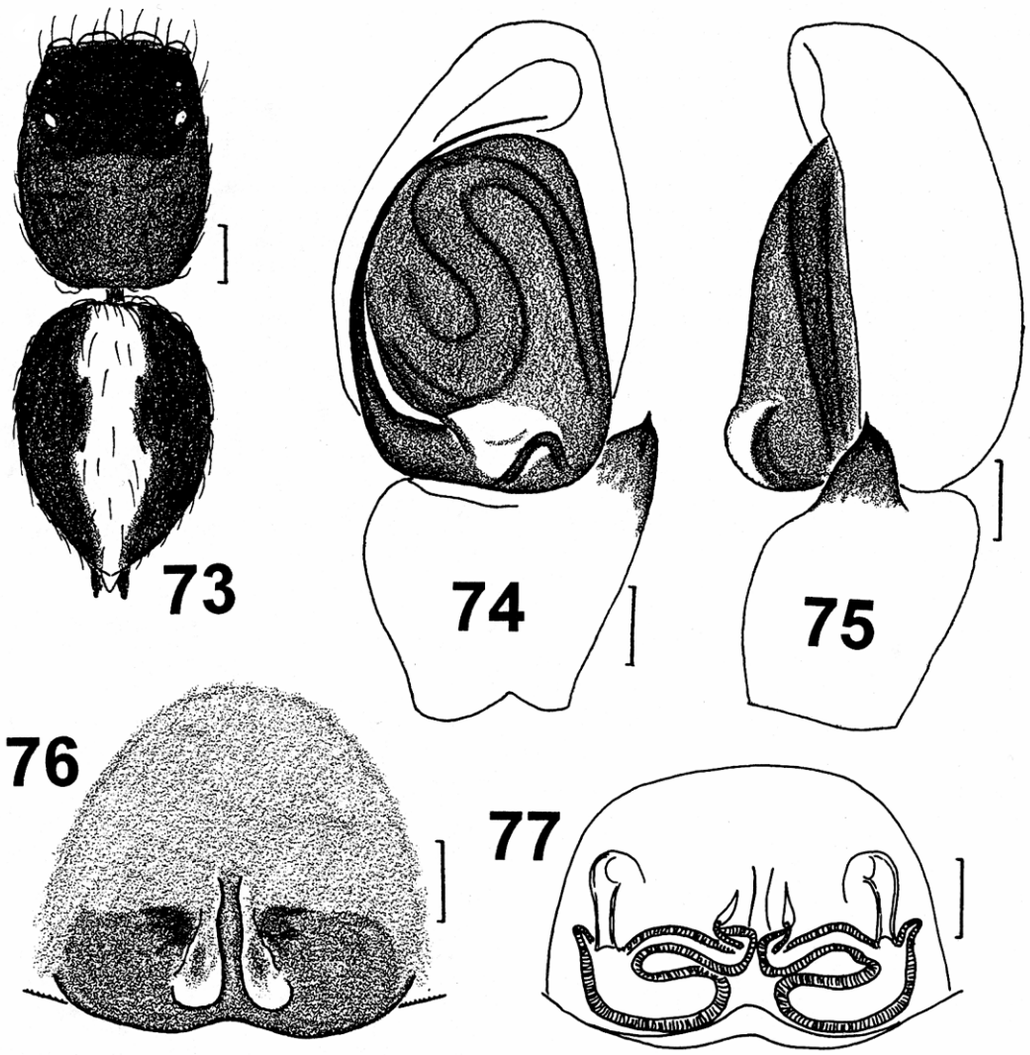

Maps 10–12. Localities of *Dendryphantes rudis* (4), *Macaroeris asiaticus* sp.n. (9), *Pellenes dilutus* (12), *Phlegra bresnieri* (8), *Plexippoides arkit* sp.n. (13), *Proszynskiana aeluriforma* sp.n. (11), *Pseudicius cinctus* (1), *P. courtaldi* (3), *P. spasskyi* (2), *Salticus aiderensis* sp.n. (5), *S. dzhungaricus* (6), *S. turkmenicus* sp.n. (7) and *Sitticus pulchellus* (10) in Middle Asia.

Карты 10–12. Местообитания *Dendryphantes rudis* (4), *Macaroeris asiaticus* sp.n. (9), *Pellenes dilutus* (12), *Phlegra bresnieri* (8), *Plexippoides arkit* sp.n. (13), *Proszynskiana aeluriforma* sp.n. (11), *Pseudicius cinctus* (1), *P. courtaldi* (3), *P. spasskyi* (2), *Salticus aiderensis* sp.n. (5), *S. dzhungaricus* (6), *S. turkmenicus* sp.n. (7) и *Sitticus pulchellus* (10) в Средней Азии.

Desert, Mt. Baikara, 7-8.06. 1990, A.F. & A.Z; 1 ♂ (ISEA), 1 ♂ (ZISP), Chu-Iliiskie Mts., Gheorghievka, 22.05. 1984, S.O.; 1 ♂ (ISEA), Sarysu Distr., ca 20 km E of Bolshie Kamkaly, 28.06.1989, A.Z.; 1 ♂ (ISEA), Talassky Distr., ca 21 road-km between Akkol and Ulanbel, 15.05.1991, S.I. Ibraev & A.Z.; 1 ♂ (ISEA), S-Kazakhstan [= Chimkent] Area, Arys, 25.05.1987, D.L.; 4 ♂♂, 2 ♀♀ (ISEA), same area, Kyzylkumy Desert, Mt. Karamola, 14–18.05.1994, A.Z.; 2 ♀♀ (ISEA), same area, ca 102 km NW of Bairkum, Oasis Dyusebai, 27–28.05.1993, A.Z.; 1 ♂ (ISEA), same area, ca 37 km WSW of Bairkum, Baimarkhan, 10–11.05.1995, A.Z. — KYRGHYZSTAN: 1 ♂ (ZISP), near Bishkek [= Frunze], "Suzakskie Adyry", 7.04.1982, S.Z.; 1 ♂ (ZISP), Dzhalal-Abad, 30.05.1979, S.Z. — TAJIKISTAN. 4 ♂♂ (ZMMU), Kurgan-Tyube Area, Ilyichevsk Distr., Aruktau Mt. Range, Gandzhina, 800 m a.s.l., 21.04.1986, A.Z. & S.Z.; 1 ♂ (ISEA), same locality, 21.06. 1988, S.Z.; 2 ♂♂ (ISEA), Karatau Mt. Range, Chimsai, 400 m a.s.l., 18.04.1986, A.Z. & S.Z. — TURKMENISTAN: 1 ♂ (ZMMU), Badhkyz Reserve, Akarcheshme, ~850 m a.s.l., 14.04.1985, S.Z.; 2 ♂♂ (ISEA), Kelif, 21.06.1976, A.K.; 4 ♂♂, 5 juv. (ISEA), Kuhitangtau Mt. Range, Dzhyilyau Plateau, Mt. Airi-Baba, 2000–2300 m a.s.l., V.D.; 2 ♂♂ (ISEA), Kopetdaghsky Reserve, Kalininsky Zakaznik, 18.05.1987, V.D.; 1 ♂ (ISEA), 58–60 km N of Guzhghy [= Kushka], Kala-i-Mor, 9–20.04.1993, D.L.; 1 ♂ (ISEA), Badhkyz, 10–12.04.1993, D.L.; 1 ♂ (ISEA), 20–25 km SE of Pulikhatum, S foothills of Ghezghyadyk Mt. Range, 500 m a.s.l., 15–16.04.1993, D.L.; 1 ♂ (ISEA), ca 8 km N of Guzhghy [= Kushka], Morgunovka, 9. 04.1993, D.L. — UNCERTAIN LOCALITY: 1 ♀ (ZISP), Alche-Say, 29.05.1912, N. Zarudnyi.

DISTRIBUTION. The species is distributed all over Middle Asia (Map 1), so far recorded in Kazakhstan: Baibek [Kroneberg, 1875: sub *Aelurops variegatus*]; Tajikistan: Kondara Canyon [Kharitonov, 1951]; Turkmenistan: Badhkyz [Ovtsharenko & Fet, 1980]; Uzbekistan: Samarkand, Khodzhaduk [Kroneberg, 1875: sub *Aelurops variegatus*], Agalyk [Nenilin, 1984a: sub *Aelurillus v.*], Aman-Kutan, Ishkent and Ughun [Kharitonov, 1969]; and Kyrghyzstan [Nenilin, 1984b].

According to Nenilin [1984a, 1985], the records of this species by Andreeva [1975, 1976: sub *Aelurillus v.*] belong to another species, *Aelurillus andreevae* Nenilin, 1984.




Figs 73–77. Genitalia of *Sitticus dubatolovi* sp.n. (paratypes): 73 — ♂ body colouration; 74, 75 — ♂ palp, ventral and lateral views; 76 — epigyne; 77 — spermathecae. Scales: 1 mm (73) and 0.1 mm (74–77).

Рис. 73–77. Гениталии *Sitticus dubatolovi* sp.n. (paratypes): 73 — окраска тела самца; 74, 75 — пальпа самца, вентрально и латерально; 76 — эпигина; 77 — сперматека. Масштаб: 1 мм (73) и 0,1 мм (74–77).

*Salticus* Latreille, 1804

*Salticus aiderensis* **sp.n.**
Figs 8, 9, Map 11.

MATERIAL. Holotype♀ (ISEA), Turkmenistan, SW-Kopetdagh Mts., near Kara-Kala, Aidere, 20.05.1982, B.P. Zakharov.

DIAGNOSIS. This new species has the uncommonly large copulatory openings (Fig. 8) and also the unusual structure of the spermathecae (Fig. 9). We know nothing similar among described congeners.

DESCRIPTION. FEMALE. Measurements. Carapace 2.25 long, 1.60 wide, 0.90 high at PLE. Ocular area 1.00 long, 1.38 wide anteriorly and 1.25 wide posteriorly. Diameter of AME 0.38. Abdomen 3.25 long, 2.00 wide. Chelicеral length 0.63. Length of leg segments: leg I: 1.00 + 0.75 + 0.75 + 0.63 + 0.63; leg II: 1.00.+ 0.63 + 0.75 + 0.50 + 0.50; leg III: 1.00 + 0.63 + 0.75 + 0.75 + 0.75; leg IV: 1.13 + 0.75 + 1.13 + 0.75 + 0.75. Leg spination. Leg I: Tib v.2-2; Mt v.2-2ap. Leg II: Tib v.1-1; Mt v.2-2ap. Leg III: Mt v.2ap. Leg IV: Mt v. 2ap. Colouration. Carapace dark brown, densely covered with white scales. Labium and maxillae brown, with grey apices. Sternum and chelicerae dark brown. Abdomen monochromously grey, densely covered with white scales. All legs yellow, densely covered with white erect hairs. Tibiae, metatarsi and tarsi of legs I and II darker, yellow-brownish. Booklung covers grey-yellow. Spinnerets dark brown. Epigyne and spermathecae as in Figs 8, 9.

DISTRIBUTION. The type locality only (Map 11).

ETYMOLOGY. The species is named after the locus typicus, Aidere, Turkmenistan.

*Salticus dzhungaricus* Logunov, 1992
Figs 69–72, Map 11.

*Salticus dzhungaricus* Logunov, 1992a: 54–55, fig. 2g, i.
*Salticus dzhungaricus*: Logunov, 1995: 246.

Material. KAZAKHSTAN: 1♀ (ZISP), Barsakelmes Island in Aral Sea, 4.07.1984, T.V. Pavlenko; 1 ♀ (ZISP, det. as *S.* aff.

*tricinctus*), same locality, 18.06.1986, D.O. Eliseev; 1 ♂ (ISEA), S-Kazakhstan [= Chimkent] Area, Arys, 4.05.1988, D.L. — TURKMENISTAN: 1♀ (ISEA), Chilmamed-Kum Sands, Ubyk, 28.10.1984, E. Khachikov; 3 ♀♀ (ISEA), Repetek, 22.04.1993, D.L.

DIAGNOSIS. See below under "Diagnosis" of *Salticus turkmenicus*.

DESCRIPTION. MALE. Measurements. Carapace 1.63 long, 1.13 wide, 0.58 high at PLE. Ocular area 0.63 long, 0.75 wide anteriorly and 0.88 wide posteriorly. Diameter of AME 0.25. Abdomen 1.75 long, 1.13 wide. Cheliceral length 0.75. Length of leg segments: leg I: 0.75 + 0.43 + 0.63 + 0.50 + 0.38; leg II: 0.60.+ 0.33 + 0.38 + 0.38 + 0.36; leg III: 0.63 + 0.33 + 0.38 + 0.38 + 0.38; leg IV: 0.68 + 0.35 + 0.50 + 0.50 + 0.38. Leg spination. Leg III: Fm d. 1-1-1; Mt 2ap. Leg IV: Fm d. 1-1-1; Mt 2ap. Colouration. Carapace brown, covered with white scales. Eye field dark brown. Chelicerae, labium and maxillae yellow. Sternum grey-yellow, covered with white scales. Entire abdomen grey-yellow, densely covered with light scales. Legs yellow with grey longitudinal (prolateral and dorsal) stripes. Leg I darker than other legs (Fig. 71). Palpal structure as in Figs 69, 70.

DISTRIBUTION. So far the species has been recorded in Kazakhstan: Dzhungarsky Alatau Mt. Range, Barsakelmes Island, Arys [Logunov, 1992a; current data]; and Turkmenistan: Repetek and Chilmamedkum sands (Ubyk) [Logunov, 1995] (Map 11). Pavlenko [1985] has recorded this species from Barsakelmes Island under the name *Salticus* sp. (pr. *tricinctus*) (Pavlenko's specimens re-examined).

Wesołowska [1996] has reported *S. dzhungaricus* from Turkmenistan. However, her material belongs in fact to a new species, *S. turkmenicus* sp.n. (see below).

### *Salticus proszynskii* Logunov, 1992

Material. KAZAKHSTAN: 1 ♀ (ISEA), Almaty Area, Dzhambul Distr., Fabrichnyi, 25–26.06.1994, A.Z.

DISTRIBUTION. Kyrghyzstan and Kazakhstan. This is a second record of *S. proszynskii*, a species hitherto known only from a few localities in Kyrghyzstan [Logunov, 1992a].

### *Salticus tricinctus* (C.L. Koch, 1846)
Map 8.

Material. KAZAKHSTAN: 6 ♀♀ (ISEA), SE-Kazakhstan, Temerlik River canyon, ~1010 m a.s.l., 26.05.1993, D.A. Milko; 1 ♂ (ISEA), S-Kazakhstan (= Chimkent) Area, near Arys, 30.04.1988, D. L.; 1 ♀ (ISEA), Almaty, Ili River, 9.07.1984, A.B. Abramov; 1 ♀ (ISEA), Almaty Area, Kapchagai, 10.06.1992, O.L.; 2 ♀♀ (ISEA), same area, 12 km N of Kapchagai, 1–3.04.1995, A.A.Feodorov. — KYRGHYZSTAN: 1 ♀ (ZMMU), N bank of Lake Issyk-Kul, Chon-Uryukty, 1700–2500 m a.s.l., 19–24.06.1993, D.A. Milko. — TAJIKISTAN: 5♂♂ (ZISP), Khatlon Area, Kuibyshevk Distr., Vakhsh River canyon, 10.1988, A.K.. — UZBEKISTAN: 7♂♂, 4 ♀♀ (ZISP), Samarkand Aea, Khishrau, Kon-Dargom, date ?, A.N.; 1 ♀ (SVO), Bukhara Area, ca 7.5 km S of Alat, 24.04.1993, S.O.; 1 ♀ (SVO), same area, 20 km S of Kagan, 19.05.1994, S.O.; 1 ♂ (ISEA), same area, 33 km SE of Bukhara, Dzheirany Pitomnik, 19.05.1994, A.Z.; 1 ♀ (ISEA), Kashkadarya Area, 50 km SE of Guzar, 15.05.1994, A.Z. — TURKMENISTAN: 10 ♂♂, 7 ♀♀ (ISEA), Krasnovodsk, 15.05.1992, Kredelev; 2 ♂♂ (ISEA), SW-Kopetdagh, near Kara-Kala, 28–29.04.1993, D.L.; 1 ♂, (SVO) same locality, 29.03.1993, S.O.; 1♂ (ISEA), ca 8 km N of Guzhghy (= Kushka), Morgunovka, 9–19.04.1993, D.L.

Comparative material. AZERBAIJAN: 2♀♀ (ISEA), Nakhichevan Republic, Shakhbuz Distr., Bichenek and Kemyur, 1500–1900 m a.s.l., P.D.; 2 ♂♂, 1 ♀ (ISEA, det. sub *S. scenicus*), Lerik, Amburdara, 12.05.1985, P.D.; 1♂ (ISEA), Baku, Zykh, 8.07.1979, P.D.

DISTRIBUTION. The species has been recorded in Afghanistan, Azerbaijan [Nenilin, 1985] and Middle Asia, where it is known from Uzbekistan: Bukhara [Koch, 1846: sub *Calliethera tricincta*], Kokand [Kroneberg, 1875: sub *Epiblemum tricincta*], Kashkadarya Area (Ugun) [Kharitonov, 1969], Dzhar-Kurgan [Andreeva, 1976], Samarkand, Khishrau, Aksak-Ata, Chatkalsky Mt. Range (Aksak-Ata), Kuraminsky Mt. Range (Kamchik) [Nenilin, 1984a,c] and Dagram [Logunov, 1992a]; Tajikistan: Vorukh [Kroneberg, 1875: sub *Epiblemun tricincta*], Tigrovaya Balka, Beshkentskaya Valley, Ramit, Kondara [Kharitonov, 1951; Andreeva, 1976], Varganza [Nenilin, 1984c] and Vakhsh Valley [Logunov, 1992a]; Kazakhstan: Kapchagai [Logunov, 1992a]; and Turkmenistan: Krasnovodsk, [Simon, 1889: sub *Calliethera tenuimana*; Nenilin, 1984c], Gasan-Kuli, Delili [Nenilin, 1984c], Badhkyz [Logunov, 1992a; Mikhailov & Fet, 1994] and Amudaryinsky Reserve (Kabakly) [Wesołowska, 1996]. All localities of *S. tricinctus* in Middle Asia are shown in Map 8.

### *Salticus turkmenicus* **sp.n.**
Figs 65-68, Map 11.

*Salticus dzhungaricus*: Wesołowska, 1996: 41-42, fig. 31

MATERIAL. Holotype ♂ (ISEA), Turkmenistan, Chardzhou Area, Amudaryinsky Reserve, Kabakly, 24.04.1987, F. Zeleev.

Paratype: 1 ♀ (ISEA), together with holotype.

DIAGNOSIS. The new species is closely related to *S. dzhungaricus*, but differs in having the straight tibial apophysis (cf. Figs 66 and 70) in males and the position of the copulatory openings (Figs. 68, 72) in females. The colouration of male leg I is also distinguishable (cf. Figs 67 and 71).

DESCRIPTION. See Wesołowska [1996: sub *S. dzhungaricus*].

DISTRIBUTION. The type locality only (Map 11). Recently, *S. turkmenicus* has been recorded in the same locality under the name *S. dzhungaricus* [see Wesołowska, 1996].

ETYMOLOGY. The species is named after the terra typica, Turkmenistan.

## *Sitticus* Simon, 1901

### *Sitticus ammophilus* (Thorell, 1875)
Map 3.

Material. KAZAKHSTAN: 1 ♀ (IZW), Barsakelmes Island in Aral Sea, 11.05.1983, T.P.; 2 ♀♀ (ZMMU), Uralsk Area, Lake Elton, 18.06.1972, coll. ?; 1 ♂, 4 ♀♀ (ISEA), same locality, 18.08.1974, coll. ?. — KYRGHYZSTAN: 2 ♂♂, 1 ♀ (SVO), E of Lake Issyk-Kul, Teploklyuchenka, 19.06.1995, S.O.; 1 ♀ (ISEA), near At-Bashi, 16.06.1987, Ark. A. Schileyko & M.E. Chernyakhovsky. — TURKMENISTAN: 2 ♀♀ (ZMMU, det. sub *S.* aff. *distinguendus*), Krasnovodsk, 13.04.1899, K.O. Anger.

DISTRIBUTION. This is a S-European – Middle Asian species [see Logunov & Wesołowska, 1995: fig. 9]. In Middle Asia, it has hitherto been recorded in Turkmensitan: Lake Sarykamysh, Amudaryinsky Reserve, Murghab [Logunov & Wesołowska, 1995; Wesołowska, 1996]; and Kazakhstan: Ustyurt Plateau [Logunov & Wesołowska, 1995] (Map 3).

### *Sitticus ansobicus* Andreeva, 1976
Map 3.

Material [forms A and B sensu Logunov, 1993a]. KYRGHYZSTAN: 11 ♂♂, 6♀♀ (form A) (SVO), Kichik-Alai Mt. Range, Kyrghyz-Ata River, S of Iski-Naukat, 2500–3000 m a.s.l., 23-27.05.1993, S.O.; 1 ♂ (form B) (SVO), Karkara River, Terskei-Alatau Mt. Range, Kokuzhar, 15.07.1983, S.O.; 3 ♂♂, 5♀♀ (form A) (SVO), Zaalaisky Mt. Range, ca 20 km W of Daraut-Kurgan, 9.07.1995, S.O.; 1 ♂ (form B) (SVO), Fergansky Mt. Range, Pass Urumbash, road from Dzhalal-Abad to Kazarman, 13.06.1995, S.O. — TAJIKISTAN: 1 ♂ (form B) (ISEA), 2 ♂♂ (form A) (SVO), Peter I Mt. Range, Childara Canyon, 13–22.07.1988, S.O.; 1 ♂, 1 ♀ (form A) (ZMMU), Hissar Mt. Range, Pass Anzob, 8.07.1988, coll. ?; 3 ♂♂, 2♀♀ (form A) (ISEA), same locality, 3.07.1967, E.M. Andreeva; 1 ♂ (form A) (ZMMU), Alaisky Mt. Range, Taldyk, 26. 08.1988, S.O.

COMMENTS. The species is restricted to the mountains of Middle Asia, where it has hitherto been recorded in Tajikistan: Anzob, Khorog, Akbaital, Hissar-Darvaz, Alaisky Mt. Range (Taldyk), Pamirs [Andreeva, 1975: sub *S. clavator ansobicus*; Andreeva, 1976], Chegheds and Yavan [Logunov, 1993a]; Kyrghyzstan: Lake Issyk-Kul (Kuturga, Dolinka, Kurskoye), Arkit, Talassky and Alaisky Mt. ranges [Logunov, 1993a; Logunov & Wesołowska, 1995]; Uzbekistan: Sary-Chelek Reserve [Logunov, 1993a]; and Kazakhstan: near Almaty (Medeo) [Logunov, 1993a]. Most of the localities of *S. ansobicus* in Middle Asia are shown in Map 3.

### *Sitticus avocator* (O.P.-Cambridge, 1885)
Map 4.

Material. KAZAKHSTAN: 1 ♂ (ZMMU), Zhambyl [= Dzhambul] Area, S of Chu Town, Chu River side, 30.06.1989, C.K. Tarabaev & A.Z.; 1 ♀ (ZISP), same area, Chu-Iliiskie Mts., Gheorghievka, 7.06.1983, S.O.; 3 ♂♂ (AVG), Almaty, Akademgorodok, 25.07.1995, A.G.; 2 ♂♂, 1 ♀ (AVG), same locality, 28.05.1993, A.G.; 1 ♀ (AVG), Almaty, Medeo, 12.08.1995, A.G.; 1 ♂ (AVG), Almaty Area, Kapchagai, 26.08.1996, A.G.; 3♀♀ (ISEA), same area, Zhambyl Distr., Fabrichny, 30.04.1995, A.Z; 2 ♂♂ (ISEA), same locality, 27.04.1997, A.Z.; 1♀ (AVG), Khantau Mts., 7 km E of Khantau, 31.05–1.06.1996, A.G.; 1 ♀ (ISEA), Taldy-Kurgan Area, Gvardeisk Distr., 7 km E of Kospan, 18-20.06.1996, A.Z.; 1 ♂ (ISEA), E-Kazakhstan Area, "Tarstalinskoe More"., 30. 08.1985, coll.? — KYRGHYZSTAN: 1♀ (ZMMU), near Bishkek, 19.04.1982, S.Z.; 1♀ (ZMMU), same locality, summer 1980, S.Z.; 1 ♂ (AVG), same locality, fooothills of Kirghizsky MT. Range, 1 km S of Orto-sai, 30.03.1997, A.G.; 1 ♀ (ZMMU), same range, Chon-Aryk, May 1982, S.O.; 1 ♀ (ISEA), 1 ♂ (ZMMU), same range, ca 20 km S of Bishkek, Malinovoye Canyon, 28.07.1984, S.O.; 1 ♂, 3 ♀♀ (ZMMU), Issyk-Kul Area, Tyup River valley, Santash, ~3000 m a.s.l., 12.08.1982, S.O.; 1♂, 3♀♀ (ZMMU), same locality, 17.07.1984, S.O.; 2♂♂, 2♀♀ (ISEA), 2♂♂ (ZISP), same locality 23.07.1983, S.O.; 1 ♀ (ISEA), NW part of Kirghizsky Mt. Range, Alash, 26.05.1993, D.A. Milko; 1 ♂, 1 ♀ (ISEA), Kaindy, ~3000 m a.s.l., 17.07.1983, S.O.; 1 ♂, 1 ♀ (ZMMU), same area, Kaindy Mt. Range, 17.07.1983, S.O.; 1 ♀ (ZMMU), same area, S slope of Terskei-Alatau Mt. Range, Sary-Dzhaz River valley, Bolshoi Berkut, ~3200 m a.s.l., 19.07.1983, S.O.; 2 ♂♂ (ISEA), same locality, 19.07.1986, S.O.; 1 ♂ (SVO), Terskei-Alatau Mt. Range, near Karkara River, Spring Kok-Dzhar, 15.07.1993, S.O.; 1 ♂, 1 ♀ (ZISP), same locality, 16.04.1983, S.O.; 1 ♂ (ZMMU), Dzhalalabad Area, Arslanbob, 20.09.1982, S.Z.; 1 ♀ (ISEA), same area, Dzhany-Dzhal Distr., Kyzyl-Dzhar, 22.06.1992, A.F. & A.Z. — TURKMENISTAN: 1 ♂ (SVO), SW-Kopetdagh, near Kara-Kala, 29.03.1993, S.O.; 1 ♀ (ISEA), Tarsakan, Sumbar riverside, 10.07.1990, V.N. Galkin.

DISTRIBUTION. The species is widespread in Asia. In Middle Asia, it has hitherto been recorded in Kyrghyzstan: Chon-Aryk, Kok-Dzhar, Bishkek and Arslanbob [Nenilin, 1984b]; and Kazakhstan: Zhambyl Area [Nenilin, 1985] and Barsakelmes Island [Pavlenko, 1985; Nenilin, 1985; Zyuzin et al., 1994]. All localities in Middle Asia are shown in Map 4.

COMMENTS. All previous records of *S. distinguendus* (Simon, 1868) in Middle Asia (Turkmenistan: Ghermab) [Nenilin, 1984a; Mikhailov & Fet, 1994] seem to belong in fact to *S. avocator*. Moreover, while comparing abundant material determined as *S. distinguendus* (from Europe and Siberia) or *S. avocator* (from Middle Asia, Siberia and the Far East), we have been unable to separate specimens as based neither on colouration nor on genitalic characters. No distinguishing features are evidently shown by Prószyński [1987: 90–92, 94–95] as well. Hence, we assume both species names seem to be synonyms. However, prior to a re-examination of the types of both taxa, we refrain from formalizing the issue.

### *Sittius barsakelmes* **sp.n.**
Figs 47, 48, Map 2

*Sitticus* sp. nov. (aff. *distinguensis*): Pavlenko, 1985: 150.

MATERIAL. Holotype ♀ (ZISP), Kazakhstan, Aral Sea, Barsakelmes Island, 8.05.1983, T.V. Pavlenko.

DIAGNOSIS. The species is most closely related to *S. kazakhstanicus* Logunov, 1992, but can be easily distinguished by the structure of both the epigyne and the spermathecae (cf. Figs 47, 48 and 49, 50).

DESCRIPTION. FEMALE (holotype). Measurements. Carapace 1.58 long, 1.30 wide, 0.80 high at PLE. Ocular area 0.93 long, 1.25 wide anteriorly and 1.20 wide posteriorly. Diameter of AME 0.38. Abdomen 2.25 long, 1.65 wide. Chelicral length 0.38. Length of leg segments: leg I: 0.88 + 0.48 + 0.55 + 0.50 + 0.45; leg II: 0.83 + 0.43 + 0.48 + 0.45 + 0.40; leg III: 0.85 + 0.40 + 0.45 + 0.50 + 0.38; leg IV: 1.25 + 0.48 + 0.85 + 0.60 + 0.45. Leg spination. Leg I: Fm d.0-1-1-2; Pt pr.0-10; Tb pr.1-2, v.1-2-2ap.; Mt v.2-2a . Leg II: Fm d.0-1-1-2; Pt 0-1-0 Tb pr.1-1-2ap., v.1-1-2ap.; Mt v.2-2ap. Leg III: Fm d.1-1-1; Pt pr and rt.0-1-0; Tb d.1-0, pr. and rt.1-1, v.1ap.; Mt d.0-1-0., pr., rt. and v.1-0-2ap. Leg IV: Fm d.1-0-1-3; Pt rt.0-1-0; Tb pr.1-1-1-1, rt. and v.1-1-1ap.; Mt pr. and rt.1-1-2ap., v.2ap. Colouration. Carapace brownish with a yellow pattern, densely covered with long semi-translucent/white scales. Black around eyes. Clypeus yellow, covered with white scales, its edge bearing a row of long white hairs hanging down. Sternum yellow, densely covered with white erect hairs. Maxillae, labium and chelicerae yellow. Abdomen yellow with a grey irregular colour pattern. All legs yellow with paired brown rings on segments, covered with light hairs. Prolateral sides of femora I additionally with a longitudinal dark brown band. Epigyne and spermathecae as in Figs 47, 48.

DISTRIBUTION. The type locality only (Map 2).

ETYMOLOGY. The species is named after the type locality, Barsakelmes island in Aral Sea, Kazakhstan.

### *Sitticus dubatolovi* **sp.n.**
Figs 73–77, Map 2.

MATERIAL. Holotype ♂ (ISEA), Taldy-Kurgan Area, 20–40 km NE of Tekeli, Dzhungarsky Alatau Mt. Range, middle flow of Kora River, 14.06.1993, V.D.

Paratypes: KAZAKHSTAN: 2 ♂♂ (ISEA), together with holotype; 1 ♂ (ISEA), 1 ♂ (ZMMU), same area, 5–40 km NE of Tekeli, 13–14.06.1993, V.D. & V.K. Zinchenko; 3 ♀♀ (ISEA), 4 ♀♀ (ZMMU), same locality, upper reaches of Kora River, ~2500 m a.s.l., 20.06.1993, V.D.; 2 ♀♀ (ZMMU), same area, N slope of Dzungarsky Alatau Mt. Range, source of Kyzyl-Agach River, 20–25 km SE of Kopal, 22.06.1993, V.D.; 2 ♀♀ (ISEA), same area, S-Dzhungarsky Alatau Mts., Toksanbai Mt. Range, 11.07.1989, S.O.

DIAGNOSIS. *S. dubatolovi* belongs to the *penicillatus* species group [sensu Logunov, 1993a], but can be separated from all congeners thereof by certain details of male body colouration (Fig. 73) and genitalic structure (Figs 74–77).

DESCRIPTION. MALE (paratype). Measurements. Carapace 2.00–2.50 long, 1.75–2.00 wide, 1.00–1.15 high at PLE. Ocular area 0.75–0.85 long, 1.50–1.85 wide anteriorly and 1.35–1.50 wide posteriorly, diameter of AME 0.40–0.55. Abdomen 2.25–2.75 long, 1.65–2.00 wide. Cheliceral length 0.85–0.90. Length of leg segmen: leg I: 1.75–2.00 + 1.00–1.25 + 1.25–2.00 + 1.00–1.25 + 0.75–0.88; leg II: 1.50–1.63 + 0.75–1.00 + 1.00–1.25 + 0.75–1.13 + 0.38–0.75; leg III: 1.25–1.50 + 0.63–0.75 + 0.63–1.25 + 0.88–0.93 + 0.55–0.75; leg IV: 1.75–2.00 + 0.75–0.88 + 1.38–1.50 + 0.75–1.25 + 0.63–0.88. Leg spination. Leg I: Fm d.0-1-1-1; Pt pr.0-1-0; Tb pr.1-0-1, v.2-2-2ap.; Mt v.2-2ap. Leg II: Fm d.0-1-1-3; Tb pr.1-0-1, v.2-2-2ap.; Mt v.2-2ap. Leg III: Fm d.0-1-1-3; Pt pr. and rt.0-1-0; Tb d.0-1-0, pr.1-1, rt.1-1-1, v.2-0-2ap.; Mt d.2-1-2ap., pr.1-1ap., rt.1ap., v.2ap. Leg IV: Fm d.0-1-1-2; Pt pr. and rt.0-1-0; Tb d.0-1-0, pr. and rt.1-1-1, v.1-0-0-2ap.; Mt d.2-2-2ap., pr.1-1ap., rt.1ap., v.2ap. Colouration. Carapace dark brown, with eye field black. Sternum light brown. Chelicerae dark brown. Labium and maxillae brown, with yellow apices. Sternum brown. Abdomen either as shown in Fig. 73 or monochromously grey. All legs brown, but tarsi usually lighter. Palpal structure as in Figs 74, 75.

FEMALE (paratype). Measurements. Carapace 2.75 long, 2.00 wide, 0.75 high at PLE. Ocular area 0.80 long, 1.50 wide anteriorly and 1.35 wide posteriorly. Diameter of AME 0.50. Abdomen 3.50 long, 2.25 wide. Cheliceral length 0.95. Length of leg segments: leg I: 1.38 + 0.88 + 1.00 + 0.75 + 0.75; leg II: 1.25 + 0.75 + 0.75 + 0.63 + 0.63; leg III: 1.25 + 0.63 + 0.75 + 0.75 + 0.68; leg IV: 2.00 + 1.00 + 1.50 + 1.13 + 0.88. Leg spination. Leg I: Fm d.1-1-2; Tb v.2-2-2ap.; Mt v.2-2a . Leg II: Fm d.1-1-2; Tb pr.0-1-0, v.2-2-2ap.; Mt v.2-2ap. Leg III: Fm d.1-1-2; Tb pr. and rt.1-1, v.1-1ap.; Mt d.2-1-2ap., pr. and rt.1ap., v.1-1ap. Leg IV: Fm d.1-1; Tb pr. and rt.1-1-1, v.1-0-2ap.; Mt d.2-2-2ap., pr., rt. and v.1ap. Colouration similar to that of male, but paler. Carapace dark brown, covered with white scales. Eye field black. Clypeus covered with white hairs, same hairs around AME. Chelicerae dark brown. Labium and maxillae brown, with yellow apices. Sternum brown. Abdomen grey, often with a pair of white spots like in all females of the *penicillatus* group. All legs light brown, with orange metatarsi and tarsi. Epigyne and spermathecae as in Figs 76, 77.

DISTRIBUTION. Kazakhstan: Dzhungarsky Alatau Mts. (Map 2).

ETYMOLOGY. The species is named after Dr. Vladimir V. Dubatolov, lepidopterist from the Siberian Zoological Museum in Novosibirsk who collected the bulk of the type series of this species.

## *Sitticus inexpectus* Logunov & Kronestedt, 1997

Material. KAZAKHSTAN: 1 ♀ (SVO), Dzhungarsky Alatau Mt. Range, near Sarkand, 28.07.1991, S.O. — TURKMENISTAN: 1 ♂ (ZMMU, det. sub *S. caricis*), Farab, 18.05.1929, V.S.

DISTRIBUTION. A Euro-Middle Asian species [see Logunov & Kronestedt, 1997: figs. 48, 49]. All previous Middle Asian records of *S. floricola* [Kroneberg, 1875: sub *Attus f.*; Kharitonov, 1932; Nenilin, 1984a; Zonstein, 1984] and *S. caricis* [Nenilin, 1985] appear to belong to *S. inexpectus*. The true records of *S. floricola* (C.L. Koch, 1837) in the area concerned seem to derive only from E-Kazakhstan (Alta Kalba and Tarbagatai) [Savelyeva, 1970: sub *S. littoralis*, 1990].

Almost without doubt, Kharitonov's [1969] record of *S. rupicola* (C.L. Koch, 1837) in Uzbekistan (Shakhrisyabz) belongs to *S. inexpectus* as well. *S. rupicola* is known to be restricted to central and S-Europe (Balkans) [Logunov & Kronestedt, 1997]. The records of *S. rupicola* in E-Kazakhstan [Savelyeva, 1990] are also wrong and actually belong to *S. floricola*.

## *Sitticus inopinabilis* Logunov, 1992
Map 2.

Material. KYRGHYZSTAN: 1 ♂ (ISEA), near Bishkek, 20.08.1994, S.O. 1 ♂ (SVO), same locality, 20.09.1995, S.O.; 1 ♂ (ZMMU), Dzhumgal Distr., ca 8 km of Chaek, 12.06.1987, Ark. A. Schileyko; 1 ♂ (ISEA), Sotkulsky Mt. Range, Shilbily, 9.08. 1987, S.O. — KAZAKHSTAN: 1 ♂ (ISEA), near Almaty, 27-28. 09.1978, M.Yu. Folkina; 2 ♂♂ (ZISP), Almaty Area, Kapchagai, 15.05.1986, A.Z.

DISTRIBUTION. The species has hitherto been known from Kazakhstan only: Baraldai-Tau Mt. Range, Charyn River, Kapchagai [Logunov, 1992a]. All localities of *S. inopinabilis* in Middle Asia are shown in Map 2.

## *Sitticus karakumensis* Logunov, 1992
Map 9.

Material. UZBEKSTAN: 1 ♂ (SVO), Bukhara Area, ca 20 km S of Kagan, 19.05.1994, S.O.

DISTRIBUTION. The species is only known from Turkmenistan: Badhkyz and Repetek [Logunov, 1992a; Mikhailov & Fet, 1994]; and Uzbekistan: Kagan [current data]. All localities of *S. karakumensis* in Middle Asia are shown in Map 9.

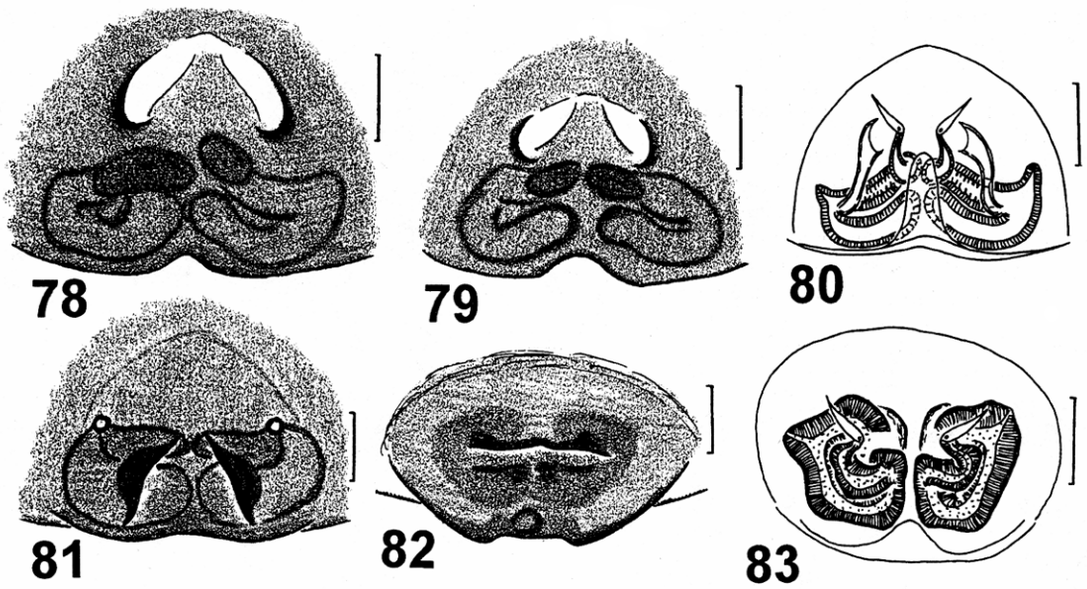
## *Sitticus kazakhstanicus* Logunov, 1992
Map 3.

Material. KAZAKHSTAN: 1 ♀ (ISEA), South-Kazakhstan (= Chimkent) Area, Kyzyl-Kum Desert, ca 37 km SW of Bairkum, Baimakhan, 10–11.05.1995, A.Z. — TURKMENISTAN: 1 ♀ (ISEA), W-Kopetdagh, Kizil-Arvat Distr., SW of Iskander, 12–18.11.1985, A.V. Abramov.

DISTRIBUTION. The species has hitherto been recorded only in S-Kazakhstan and Turkmenistan [Logunov, 1992a; current data] (Map 3).

## *Sitticus mirandus* Logunov, 1993
Map 2.

Material. KAZAKHSTAN: 1 ♀ (SVO), Charyn Canyon, Sartogai, 12.06.1993, S.O.; 1 ♂ (AVG), Almaty Area, Zhambyl Distr., 74 km W of Samsy, 10.04.1994, A.G. — KYRGHYZSTAN: 1 ♂, 1 ♀ (ZMMU), Issyk-Kul Area, Dolinka, 26.06.1980, S.Z.; 1 ♀ (ZMMU), same locality, 21.08.1980, S.Z.; 2 ♀♀ (ZMMU), same area, Kurskoe, 10.08.1980, S.Z.; 1 ♂ (ZMMU, det. sub *S. ansobicus*), same area, Santash, 17.07.1984, S.O.; 1 ♂ (ZMMU, det. sub *S. ansobicus*), same area, Kunghei-Alatoo Mt. Range, Chon-




Figs 78–83. ♀ genitalia of *Sitticus* sp.2 (78–80), *Sitticus* sp.1 (81) and *Proszynskiana* sp. (83): 78, 79, 81, 82 — epigyne; 80, 83 — spermathecae. Scale: 0.1 mm.

Рис. 78–83. Гениталии самок *Sitticus* sp.2 (78–80), *Sitticus* sp.1 (81) и *Proszynskiana* sp. (83): 78, 79, 81, 82 — эпигина; 80, 83 — сперматека. Масштаб: 0,1 мм.

Uryukty, 2000–2500 m a.s.l., 26.06.1983, S.O.; 1 ♂ (SVO), Sary-Chelek Reserve, Arkit, 29.05.1993, S.O.; 1♂ (ISEA), same locality, 2–5.05.1983, S.Z.; 1 ♂ (SVO), Dzhalalabad Area, Yarodar, near Arslanbob, 14.07.1991, S.O.; 1♀ (SVO), Kirghizsky Mt. Range, Ala-Archa River valley, 29.06.1993, S.O.; 1 ♂ (ZMMU, det. sub *S. ansobicus*), Kaindy Mt. Range, ~3000 m a.s.l., 17.07.1983, S.O.

DISTRIBUTION. The species seems to display a Middle Asian – W-Mongolian subboreal distribution pattern. It has hitherto been recorded in Tuva, Kyrghyzstan (near Bishkek, Kuturga and Sary-Chelek) and Kazakhstan (Kapchagai, Kent, Maralikha) [Logunov 1993a; current data]. All localities of *S. mirandus* in Middle Asia are shown in Map 2.

## *Sitticus monstrabilis* Logunov, 1992
Map 3.

Material. KAZAKHSTAN: 3 ♀♀ (ISEA), Dzhungarsky Mt. Range, Sarkand, 28.06.1989, S.O.; 1 ♀ (ZMMU), near Almaty, Zailiisky Alatau Mt. Range, Bolshaya Almatinka River canyon (43°05′N, 76°59′E), 2400–2600 m a.s.l., 1–3.09.1992, K.Yu. Eskov; 1 ♂ (ISEA), same locality, ~2500 m a.s.l., 10.07.1993, Y.M.; 2 ♀♀ (ISEA), same locality, ~2500 m a.s.l., 3–10.07.1995, Y.M.; 1 ♀ (ZMMU), near Almaty, Medeo, 6.09.1990, A.Z. — KYRGHYZSTAN: 1♂ (SVO), Lake Issyk-Kul, Cholpon-Ata, 20.05.1995, S.O.; 1 ♀ (ISEA), Osh Area, Sarybulak, 23.06.1991, S.O.

DISTRIBUTION. The species has been recorded in SE-Kazakhstan: near Almaty, Talgar River, Sarkand and Cheden [Logunov, 1992a; Logunov & Wesołowska, 1995; Logunov & Kronestedt, 1997; current data]; and Kyrghyzstan: Lake Issyk-Kul (Cholpon-Ata, Kuturga and Tyup River) and Sarybulak [Logunov & Kronestedt, 1997; current data]. All localities of *S. monstrabilis* in Middle Asia are shown in Map 3.

## *Sitticus nenilini* Logunov & Wesołowska, 1993
Map 5.

Material. KAZAKHSTAN: 1♀ (ISEA), Almaty Area, Zhambyl Distr., 80–95 km from Uzunagach, 12.05.1992, A.F. & A.Z.; 1 ♂, 1 ♀ (AVG), same area and disrtict, 50 km W of Samsy, 9.04.1997, A.G.; 1 ♂ (ISEA), same area, Sarysu Distr., ca 40 km NE of Ulanbel, Shigheldy, Betpak-Dala Desert, 20.05.1991, S.I. Ibraev & A.Z. — KYRGHYZSTAN: 1 ♀ (SVO), near Bishkek, Chu River valley, Kamyshanovka, 7.05.1985, S.O.; 1 ♂ (SVO), same locality, Kok-Dzhar, 28.05.1985, S.O.

COMMENTS. The species is known from Kazakhstan: Ustyurt Plateau, Arys, Kapchagai, near Almaty, Ulanbel [Logunov & Wesołowska, 1993, 1995; current data); and Kyrghyzstan: near Bishkek (Kok-Dzhar, Dzhanghi-Pakhta, Kamyshanovka) [Logunov & Wesołowska, 1995; current data]. All localities of *S. nenilini* in Middle Asia are shown in Map 5.

## *Sitticus pulchellus* Logunov, 1992
Map 12.

Material. KYRGHYZSTAN: 1 ♀ (SVO), Chu River valley, Nizhnechuisk, 20.10.1984, S.O.

DISTRIBUTION. The species has hitherto been reported from Kazakhstan: Arys and Ustyurt Plateau [Logunov, 1995]; and Kyrghyzstan: near Bishkek, Osh Area (Otuz-Adyr), Fergansky Mt. Range (Alash) and Chu River [Logunov, 1992a; Logunov & Wesołowska, 1995; current data]. All localities of *S. pulchellus* in Middle Asia are shown in Map 12.

## *Sitticus talgarensis* Logunov & Wesołowska, 1993
Map 1.

Material. KAZAKHSTAN: 3 ♂♂, 8 ♀♀ (ZMMU), near Almaty, Lake Bolshoe Almatinskoye, ~2500 m a.s.l., 3.07.1992, A.F.; 17 ♂♂, 39 ♀♀ (ISEA), 16 ♂♂, 33 ♀♀ (ZMMU), same locality, 2500–3450 m a.s.l., 5–26.07.1995, Y.M. & O. Karaseva; 1 ♂ (SVO) same locality, 9.06.1993, S.O.; 7 ♀♀ (SVO), same locality, 1.09.1992, S.O.; 3♀♀ (ZMMU), same locality, 2400-2600 m a.s.l., 1–3.09.1992, K.Y. Eskov; 1 ♀ (SVO), same locality, Zailiisky Alatau, Pass Assy, 6.07.1993, S.O. — KYRGHYZSTAN:

1 ♂ (ISEA), W part of Kunghei-Alatoo Mt. Range, Boomskoye Canyon, Kyz-Kue, 28.06.1991, S.O.; 3 ♂♂, 1 ♀ (SVO), E part of Susamyrtoo Mt. Range, Kobuksu River, 7.07.1993, S.O.; 1♀ (SVO), near Bishkek, Sary-Dzhaz River valley, Kuilyu, 14.07.1983, S.O.; 5 ♂♂, 8 ♀♀ (ISEA), Kirghizsky Mt. Range, Chon-Kurchak, 7.07.1996, S.O.

DISTRIBUTION. Mountainous Middle Asia only, where the species has hitherto been recorded in Kazakhstan: near Almaty and Almaatinsky Reserve [Logunov & Wesołowska, 1993, 1995; current data]; and Kyrghyzstan: near Bishkek (Sary-Dzhaz; Ken-Su and Chon-Kurchak), Susamyrtoo (Kobuksu River), Artabash (Bosogo) and Kunghei-Alatoo Mt. Range (Chon-Uryukty) [Logunov & Wesołowska, 1995; current data]. All localities of *S. talgarensis* in Middle Asia are shown in Map 1.

*Sitticus* sp. 1

Fig. 81.

Material. KYRGHYZSTAN: 1 ♀ (ISEA), Inner Tian-Shan Mts., middle flow of Kokomeren River, Ornok, June 1991, S.Z.

COMMENTS. This is probably a new species closely related to *Sitticus nenilini* [cf. Fig. 81 and Logunov & Wesołowska, 1993: figs 11, 12]. Regrettably, the spermathecae of this female were destroyed during examination. As we have been unable to study its structure, we postpone a formal description before additioinal samples, including males, have been acquired.

*Sitticus* sp. 2

Figs 78–80.

Material. KAZAKHSTAN: 2 ♀♀ (ISEA), Almaty Area, Talgar Distr., Almaatinsky Reserve, middle reaches of Talgar River, 2800–2900 m a.s.l., 29.08.1984, coll. ?

COMMENTS. This species is most closely related to or the same as *S. avocator*. However, its genitalia differ in having a sort of a median keel on the epigyne (Figs 78, 79), a structure never observed in the true *S. avocator* [cf. Prószyński, 1987: 90–92, 94–95]. Hence, most probably we face another new species, but males and additional females are required to prove or disprove the above difference.

*Thyene* Simon, 1885

*Thyene imperialis* (Rossi, 1846)

Map 6.

Material. TURKMENISTAN: 1 ♂, 1 ♀ (ISEA), Krasnovodsk, 15.05.1992, V. Krendelev; 1 ♂, 1 ♀ (ISEA), Kuhitangtau Mt. Range, 12.05.1985, S.Z.; 1 ♂ (ZMMU), W-Kopetdagh, Sharlouk, 30.05.1982, S.I. Zabelin; 2 ♀ (ZMMU), SE-Kopetdagh, Aidere, 700-800 m a.s.l., 24–28.04.1989, K.M.; 1 ♀ (ZISP), same locality, Garry-Gala (= Kara-Kala), 15.02.1980, V.Ya. Fet; 1 ♂ (ZMMU), Sultanbent, 30.05.1929, V.S.; 1 ♂ (ZISP), Ashghabad Area, 08. 1982, coll. ?; 3♀♀ (ISEA), Karakumy Distr., Sovkhoz Karakumsky, 4.07.1982, coll. ?

DISTRIBUTION. The species has repeatedly been reported from E Africa, the Mediterranean and the Near East. In Middle Asia, it has hitherto been recorded in Tajikistan: Tigrovaya Balka, Voroshilovbad [Andreeva, 1975, 1976; Nenilin, 1984a]; and Turkmenistan: SW-Kopetdagh [Fet, 1983, 1985a,b; Wesołowska, 1996], Sharlouk, Sultanbent and Gasan-Kuli [Mikhailov & Fet, 1994]. All localities of *T. imperialis* in Middle Asia are shown in Map 6.

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