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The linyphiid spiders of Middle Asia

(Arachnida: Araneae: Linyphiidae).

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With 226 figures, 1 map and 3 tables.

Abstract: A revision of the Middle Asian Linyphiidae is presented based on both extensive collections and full literature data. The currently known linyphiid fauna of Middle Asia comprises 63 genera and 129 species, of which five are new for the USSR fauna, and 34 new for science: *Agyneta kopetdaghensis* n. sp., *A. subnivalis* n. sp., *A. tianschanica* n. sp., *Bolyphantes indexoides* n. sp., *B. severtzovi* n. sp., *Lepthyphantes bipartitus* n. sp., *L. cruciformis* n. sp., *L. escapus* n. sp., *L. hissaricus* n. sp., *L. kronebergi* n. sp., *L. kuhitangensis* n. sp., *L. ovtchinnikovi* n. sp., *L. palaeformis* n. sp., *L. pamiricus* n. sp., *L. potanini* n. sp., *L. subtilis* n. sp., *L. turkestanicus* n. sp., *L. ultimus* n. sp., *L. zonsteini* n. sp., *Stemonyphantes curvipes* n. sp., *Troglohyphantes molestus* n. sp., *Asthenargus edentulus* n. sp., *Collinsia tianschanica* n. sp., *Diplocephalus bifurcatus* n. sp., *D. montanus* n. sp., *Erigonoplus kirghizicus* n. sp., *Mecynargus asiaticus* n. sp., *Panamomops pamiricus* n. sp., *Scotinotylus tianschanicus* n. sp., *Tibioplus tachygynoides* n. sp., *Trachelocamptus asiaticus* n. sp., *T. monoceros* n. sp., *Trichopterna grummi* n. sp., and *Mesasigone mira* n. gen., n. sp. The following synonyms and new combinations are proposed: *Conigerella* HOLM 1969 = *Mecynargus* KULCZYŃSKI 1894, *Hubertinus* WUNDERLICH 1980 = *Alioranus* SIMON 1926, *Erigone kansuensis* SCHENKEL 1963 = *Erigone atra* BLACKWALL 1833, *Stemonyphantes volucer* TANASEVITCH 1985 = *Stemonyphantes griseus* (SCHENKEL 1937) (n. comb. ex *Labulla*) n. syn.; *Tapinocyba locketi* TANASEVITCH 1983 = *Dactylopisthes locketi* (TANASEVITCH 1983), *Scytiella mirabilis* TANASEVITCH 1985 = *Dactylopisthes mirabilis* (TANASEVITCH 1985), *Gonatium griseolineatum* SCHENKEL 1937 = *Oinia griseolineata* (SCHENKEL 1937) n. comb. Full faunistic data, distributional pattern, vertical stratification for each species discovered in the region are given. The Middle Asian linyphiid fauna consists of 50% regional endemics, 40% widespread forms, 6% Ancient Mediterranean and 2% Central Asian elements.

Introduction.

Middle Asia as a geographical term has been treated differently by different authors. However, I follow the opinion of GVOZDETSKY & MIKHAILOV (1978) that Middle Asia consists of the USSR territories comprising Turkmenia (= Turkmenistan), Uzbekistan, Tadjikistan, Kirghizia, and the southern part of Kazakhstan. The western border is the Caspian Sea coast, the northern one reaches the northern brink of the Ustyurt Plateau and further eastward moves along the

line northern coast of the Aral Sea — Lake Balkhash — Lake Alakol; the southern and eastern borders of Middle Asia coincide with the USSR frontiers with Iran, Afghanistan, and China. Of course, the present concept of Middle Asia delimited by the USSR territory reflects neither physico-geographical nor biogeographical regioning of Eurasia. In spite of that, I am obliged to accept it, taking into account the aims and capacities of the present investigation.

The territory of Middle Asia, which roughly constitutes 1/9th of that of the entire USSR, is known to be highly peculiar and contrasting as regards the physico-geographical conditions. It comprises vast plain (Turan Lowland) and huge mountain systems (Tien-Shang, Pamir-Alai), the highest USSR peaks (Peak of Communism: 7495 m, Peak of Victory: 7439 m) and the lowest USSR depression (Karagiye:132 m below s.l.); the great glaciers and permanent snows of Pamir almost neighbours to the "pole of heat" (near Termez); dry and infertile deserts sometimes include flourishing oases; sunburnt mountain slopes are often cut by deep canyons harbouring excellent forests. The inland and southern disposition of Middle Asia, its remoteness from any ocean and its high mountains hamper penetration of Mediterranean cyclones and S-Asian monsoons, thus determining the continental sharply climate which, due to the southern latitudes, turns out to be arid. The aridity of the climate is particularly well-expressed in lowlands or plains, where desert or semi-desert landscapes predominate, while in the mountains an altitudinal zonation is well-developed, as a rule.

The peculiar natural conditions, as well as the rich geological history of the region under study are certainly very important factors for understanding the rich and highly conspicuous plant and animal life of Middle Asia.

In general, spiders of the Middle Asian fauna have been quite poorly known. This holds true for Linyphiidae as well. Taxonomic/faunistic data on this family are scattered in over 30 papers: Kroneberg 1875, 1888; Simon 1889, 1899; Kulczyński 1926; Spassky & Shnitnikov 1937; Vlasov & Sytshevskaja 1937; Spassky 1941, 1952; Spassky & Luppova 1945; Charitonov 1932, 1969; Yakhontov 1955; Andreeva & Tystshenko 1970; Andreeva-Prószyńskaya 1974; Bronstein & Murtazaev 1974; Andreeva 1975, 1976; Bakhvalov & Dereza 1976; Wunderlich 1977; Tarabaev 1979; Ovtsharenko & Fet 1980; Krivokhatsky & Fet 1981; Fet 1983; Tanasevitch 1983, 1984, 1985, 1986, 1987a; Kuznetsov 1984; Zonstein 1984; Pavlenko 1985; Tanasevitch & Fet 1986. However, the useful information is scanty, incomplete, often duplicates one another, and sometimes is even dubious, as certain misidentifications have probably been involved.

The first record of Middle Asian Linyphiidae belongs to Kroneberg (1875) who treated the spider collections of A. Fedtschenko's expedition to Turkestan in 1868—1871. At present, this collection is housed at the Zoological Museum of the Moscow State University, Moscow (ZMMU), and I have been able to restudy its linyphiids. The results are as follows (Kroneberg's identifications are given first):

TA 1105 (2♀) *Erigone bicuspidata* Menge 1869 = *Oedothorax apicatus* (Blackwall 1850).
TA 1106 (1♀) *Erigone dentipalpis* (Wider 1834) = *Erigone vagans* Savigny & Audouin 1825.
TA 1107 (1♀) *Erigone fuscipalpis* (C. L. Koch 1836) = *Agyneta fuscipalpis* (C. L. Koch 1836).
TA 1137 (1♀) *Linyphia hortensis* Sundevall 1829 = *Linyphia hortensis* Sundevall 1829.
TA 1138 (1♀) *Linyphia nebulosa* Sundevall 1830 = *Lepthyphantes kronebergi* n. sp.
TA 1139 (1♀) & TA 1140 (1♀) *Linyphia pusilla* Sundevall 1829 = *Microlinyphia pusilla* (Sundevall 1829).

Out of the other publications containing data on Middle Asian linyphiids, only those of ANDREEVA & TYSTSHENKO (1970), TANASEVITCH (1983, 1985), and TANASEVITCH & FET (1986) specially deal with this spider family, being devoted to the faunas of Tadjikistan, Uzbekistan, Kirghizia, and Turkmenia, respectively.

All in all, about 100 linyphiid species have hitherto been registered in Middle Asia, though I have dared to include in the general list below only the forms (re)studied upon pertinent material or fairly reliably identified by the earlier authors. The following species appear to be excluded from the general list:

1) Not or wrongly identified, but verified upon pertinent material (wrong names on the left):

Bolyphantes luteolus (BLACKWALL 1833): ZONSTEIN (1984: 146) = *Bolyphantes indexoides* n. sp.
Diplocentria bidentata (EMERTON 1882): ANDREEVA (1975: 335, 1976: 67) = *Trichoncoides piscator* (SIMON 1884).
Diplocephalus cristatus (BLACKWALL 1833): ANDREEVA & TYSTSHENKO (1970: 40), ANDREEVA-PRÓSZYŃSKAYA (1974: 6), ANDREEVA (1975: 335, 1976: 63) = *Diplocephalus montanus* n. sp.
Dismodicus elevatus (C. L. KOCH 1838): ANDREEVA (1975: 335, 1976: 61) = *Oedothorax apicatus* (BLACKWALL 1850).
Hypomma cornuta (BLACKWALL 1833): CHARITONOV (1932: 94, Turkestan), SPASSKY (1952: 197) = *Oedothorax apicatus* (BLACKWALL 1850).
Lepthyphantes nebulosus (SUNDEVALL 1830): VLASOV & SYTSHEVSKAJA (1937: 250), ANDREEVA (1975: 334, 1976: 59), FET (1983: 839), KUZNETSOV (1984: 264), ZONSTEIN (1984: 146) = *Lepthyphantes nebulosoides* WUNDERLICH 1977.
Lepthyphantes nebulosus (SUNDEVALL 1830): CHARITONOV (1932: 75, Turkestan) = *Lepthyphantes kronebergi* n. sp.
Lepthyphantes tenebricola (WIDER 1834): ANDREEVA (1975: 334, 1976: 59), FET (1983: 839) = *Lepthyphantes tenuis* (BLACKWALL 1852).
Linyphia pr. *tenuipalpis* (SIMON 1884): PAVLENKO (1985: 153) = *Lepthyphantes kronebergi* n. sp.
Meioneta gulosa (L. KOCH 1869): ANDREEVA (1975: 334, 1976: 59) = *Agyneta (Meioneta)* sp. (unidentifiable ♀).
Micrargus herbigradus (BLACKWALL 1854): ANDREEVA & TYSTSHENKO (1970: 38), ANDREEVA (1975: 335, 1976: 61) = *Trichoncoides piscator* (SIMON 1884).
Oedothorax retusus (WESTRING 1851): ANDREEVA & TYSTSHENKO (1970: 38), ANDREEVA (1975: 335, 1976: 61) = *Oedothorax apicatus* (BLACKWALL 1850).
Pelecopsis nemoralis (BLACKWALL 1841): OVTSHARENKO & FET (1980: 444) = *Pelecopsis laptevi* TANASEVITCH & FET 1986.
Scotinotylus clavatus (SCHENKEL 1927): ZONSTEIN (1984: 147) = *Scotinotylus tianschanicus* n. sp.
Theonina cornix (SIMON 1881): ANDREEVA (1975: 334, 1976: 59) = *Agyneta (Meioneta)* sp. (unidentifiable ♀).
Thyreosthenius asiaticus ANDREEVA & TYSTSHENKO 1970: ANDREEVA & TYSTSHENKO (1970: 40), ANDREEVA-PRÓSZYŃSKAYA (1974: 6), ANDREEVA (1975: 335, 1976: 63) = *Ceratinopsis romana* (O. PICKARD-CAMBRIDGE 1872).
Lepthyphantes sp. OVTSHARENKO & FET 1980: 444 = *Lepthyphantes turanicus* TANASEVITCH & FET 1986.
Lepthyphantes sp. 1 ANDREEVA 1975: 334, 1976: 60 = *Lepthyphantes kronebergi* n. sp.
Lepthyphantes sp. 2 ANDREEVA 1975: 334, 1976: 60 = *Lepthyphantes tenuis* (BLACKWALL 1852).
Lepthyphantes sp. 3 ANDREEVA 1975: 334, 1976: 60 = *Scotargus pilosus* SIMON 1913.
Linyphia sp. 1 ANDREEVA 1975: 335, 1976: 60 = *Lepthyphantes tenuis* (BLACKWALL 1852).
Linyphia sp. 2 ANDREEVA 1975: 335, 1976: 60 = *Enoplognatha testacea* SIMON 1884.
Meioneta sp. ANDREEVA 1975: 334, 1976: 59 = *Agyneta (Meioneta)* sp. (unidentifiable ♀).
Meioneta sp. FET 1983: 839 = *Agyneta kopetdaghensis* n. sp.
Pelecopsis sp. KRIVOKHATSKY & FET 1981: 47 = *Pelecopsis laptevi* TANASEVITCH & FET 1986.

2) Dubious forms, the identity of which turned out to be impossible to verify due to the absence of pertinent material:

Asthenargus placidus (Simon 1884): Tarabaev (1979: 120).
Ceratinella brevipes (Westring 1851): Bakhvalov & Dereza (1976: 85).
Erigonella sp.: Andreeva (1975: 335, 1976: 67).
Lepthyphantes sp.: Bronstein & Murtazaev (1974: 138).
Lepthyphantes sp. 4 Andreeva 1975: 334, 1976: 60.
Micrargus subaequalis (Westring 1851): Bronstein & Murtazaev (1974: 138).
Monocephalus sp.: Andreeva (1975: 335, 1976: 67).
Poeciloneta sp.: Bronstein & Murtazaev (1974: 138).

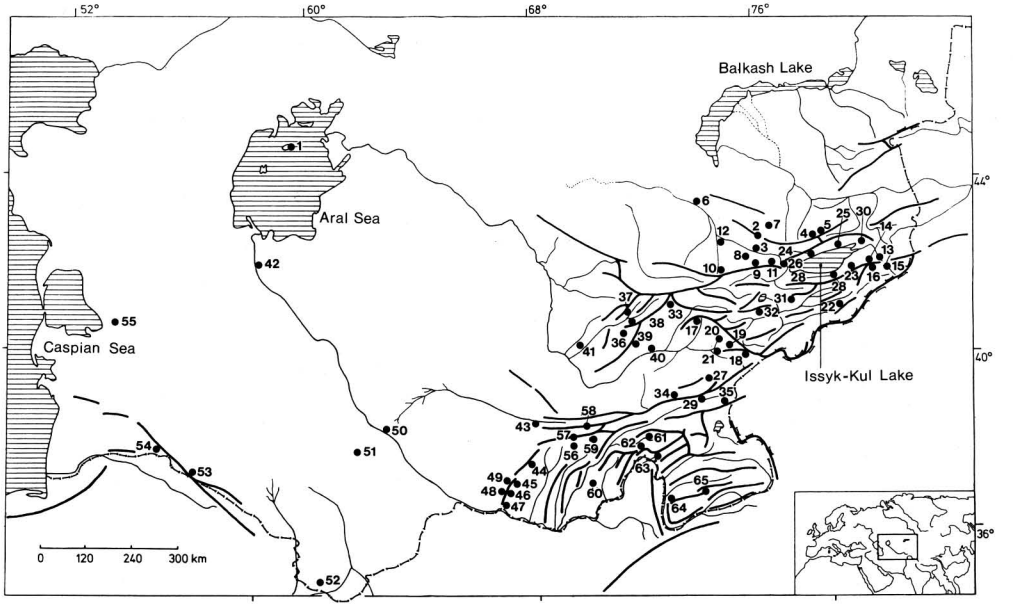
3) Questionable forms, which are likely to occur in Middle Asia, but their finds need confirmation upon pertinent material:

Lepthyphantes leprosus (Ohlert 1867): Spassky & Shnitnikov (1937: 274).
Microlinyphia impigra (O. Pickard-Cambridge 1871): Bakhvalov & Dereza (1976: 85, sub *Linyphia* Latreille 1804).
Neriene emphana (Walckenaer 1842): Bakhvalov & Dereza (1976: 85, sub *Linyphia* Latreille 1804).
Neriene montana (Clerk 1757): Spassky & Shnitnikov (1937: 274), Andreeva (1975: 335, 1976: 60, sub *Linyphia* Latreille 1804).
Pityohyphantes phrigianus (C. L. Koch 1836): Spassky & Shnitnikov (1937: 274, sub *Linyphia* Latreille 1804).

4) *Erigone charitonovi* Andreeva & Tystshenko 1970 (Andreeva & Tystshenko 1970: 41; Andreeva 1975: 335, 1976: 64), is a dubious taxon originally described by a single ♂ (holotype) and a single ♀ (paratype) from different localities in Tadjikistan. The ♂, judging from the original description, is extremely similar to *Erigone vagans* Savigny & Audouin 1825 and might turn out to be an aberrant specimen of the latter (thus, both these taxa being synonyms), while the ♀, judging from the depicted epigyne, does not belong in the *vagans*-group at all, being a representative of some other linyphiid species or even genus. Therefore, I prefer to exclude the name *charitonovi* from the general list below, the more so as the only member of the *vagans*-group in Middle Asia (widespread throughout the entire region), as witnessed by pertinent material at hand, is *vagans* proper.

The present paper is a revision of the Linyphiidae of Middle Asia based on both extensive materials and literature data and comprising a complete review of the fauna, taxonomy, and zoogeography of this group.

Material: The materials serving the base of the present study were collected in various parts of Middle Asia (Map 1) in 1929—1985 by S. Alexeev (S.A.), E. Andreeva (E.A.), T. Domracheva (T.D.), K. Eskov (K.E.), V. Fet (V.F.), A. Konkov (A.K.), R. Kostchanova (R.K.), V. Krivokhatsky (V.K.), S. Kuznetsov (S.K.), E. Luppova (E.L.), V. Makeev (V.M.), Y. Marusik (Y.M.), D. Nadzimkhanov (D.N.), A. Nenilin (A.N.), S. Ovtchinnikov (S.O.), V. Ovtsharenko (V.O), T. Pavlenko (T.P.), B. Pavlyuk (B.P.), N. Polchaninova (N.P.), Y. Ramanzanov (Y.R.), S. Rybin (S.R.), A. Ryvkin (A.R.), E. Seredina (E.S.), V. Shnitnikov (V.S.), T. Sorochina (T.S.), V. Sytshevskaja (V.S.), A. Tanasevitch (A.T.), C. Tarabaev (C.T.), N. Turtseva (N.T.), N. Ustinova (N.U.), Y. Vlasov (Y.V.), P. Vtorov (P.V.), S. I. Zabelin (S.I.Z.), B. Zakharov (B.Z.), L. Zharkova (L.Z.), S. Zonstein (S.Z.), and A. Zorkin (A.Z.). Besides this, the A. Fedschenko Collection of 1868—1871 and the E. Andreeva Collection of 1966—1970, both housed at the ZMMU, deriving from Middle



Map 1. The localities of Middle Asian Linyphiidae. — Kazakhstan: 1) Barsakelmes Island; 2) Kurdai Pass; 3) Georgievka; 4) Alma-Ata State Reserve, Aksai Valley, Bolshaya Almatinka Valley; 5) Medeo; 6) Furmanovka; 7) Kopal. — Kirghizia: 8) Frunze, Orto-Sai Valley, Kok-Djar, Chon-Aryk Valley; 9) Malinovoye Valley, Ala-Archa Valley; 10) Tyuya-Ashu Pass; 11) Issyk-Ata Valley; 12) Nishnechyuisk, Djangi-Pakhta; 13) Santash Valley, upper reaches of Tyup River; 14) Djelandy Valley; 15) Bolshoi Berkut Valley; 16) Chon-Ashu Pass, Koilyu Valley; 17) Yarodar, Arslanbob, Kurgan Yar Valley, Aral Valley; 18) Kara-Kuldja Valley; 19) Telek Valley; 20) Djelalabad; 21) Uzgen; 22) Meteorological Station "Tian-Shan"; 23) Pokrovka, Chon-Kyzylsu Valley, Ashutur Valley, Kashkator Valley; 24) Cholpon-Ata Valley, Dolinka; 25) Chon-Uryukty Valley; 26) Buamskoye Valley; 27) Aravan; 28) Barskaun Valley; 29) Balykty Valley, Sary-Tash; 30) Karkara, NE part of Issyk-Kul Depression; 31) Ala-Myshik Valley; 32) Sary-Bulak Valley; 33) Sary-Chelek State Reserve; 34) Shakhimardan; 35) Bordaba. — Uzbekistan: 36) Chatkal State Reserve; 37) Sidjak; 38) mouth of Chatkal River; 39) Kamchik Pass, Kamchik-Sai Valley; 40) Beshkul, Uigur-Sai; 41) Tashkent; 42) Nukus; 43) Samarkand; 44) Amirtemir Valley; 45) Bagly-Dara Valley; 46) Kampyrtepa Valley; 47) Aktash. — Turkmenia: 48) Svintsovy Rudnik; 49) Khodja-Ata; 50) Farab, Nargyz Island; 51) Repetek State Reserve; 52) Badhkyz; 53) Firyuza, Firyuzinka River; 54) Sumbar Valley, Aidere Valley, Eldere Valley, Kalaligez, Syunt-Khasardagh State Reserve; 55) Kafigshem. — Tadjikistan: 56) Dushanbe; 57) Anzob Pass, Kondara Valley, Yagnob Valley, Maikhura River; 58) Kuravli-Sai; 59) Ramit State Reserve; 60) Kurgan-Tyube; 61) Sangvor State Reserve; 62) Khobu-Rubot Pass; 63) Vishkharv; 64) Khorog; 65) Sasyk-Kul Lake.

Asia, have been revised. In addition, part of the collections of the Swedish-Chinese expedition to China made in 1927—1930 by Sven Hedin and Sü Ping-Chang nowadays housed at the Naturhistoriska Riksmuseet, Stockholm (NRS), and the collections of G. Potanin's Expeditions to China in 1884—1886 of the Muséum National d'Histoire Naturelle, Paris (MNHN), and in 1892—1893 of the Zoological Institute of the USSR Academy of Sciences, Leningrad

(ZIL), have been revised for comparative purposes (s. Appendix). To clarify the status of certain Middle Asian forms, I have received on loan some of E. SIMON's types kept at the MNHM.

Out of a total of 3100 adult specimens of Linyphiidae accumulated for the present investigation, some 2000 have been treated herein. All the materials have been shared, as indicated hereinafter, between the collections of the ZMMU, ZIL, and Senckenberg Museum, Frankfurt a. M. (SMF).

In the text, each locality is followed by the respective number put in square brackets and referring to the number in Map 1.

For nomenclature of older well-known species the reader is invited to consult the catalogue by BONNET (1955—1959). Therefore, the nomenclatorial remarks given here refer only to less known taxa and/or regional citations.

Abbreviations: AME = anterior median eyes; PME = posterior median eyes; Fe = femur; Ti = tibia; Mt = metatarsus; Tm = position of metatarsal trichobothrium; C = cymbium; P = paracymbium; SA = suprategular apophysis; ED = embolic division; E = embolus; M = membrane; R = radix; L = lamella characteristica; S = scape; AS & PS = anterior and posterior parts of S, respectively (sensu WANLESS 1973); St = stretcher; LP = lateral plate; MP = median plate. The chaetotaxy is given in the following formula: TiI: 2-2-2-4. This stands for: tibia I has two dorsal, two pro-, two retrolateral and four ventral spines (the apical spines are herewith disregarded). The formula such as 2.2.2.1 (for Erigoninae and *Agyneta*) refers to the number of dorsal spines on Ti I-IV.

All measurements are given hereinafter in mm. The scale is 0·1 mm, if not otherwise indicated.

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List of Middle Asian Linyphiidae.

Subfamily Linyphiinae.

Agyneta (Agyneta) cauta (O. PICKARD-CAMBRIDGE 1902).

Material: 1♂ 5♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33] near Arkit, 1300-1500 m, *Juglans regia* forest, litter, 29.IV.-4.V.1983; leg. A.T. & S.Z.

Remarks: This species is new for the Middle Asian fauna.

Agyneta (Meioneta) fuscipalpis (C. L. Koch 1836).

1875 *Erigone fuscipalpis*, — Kroneberg, Izv. Obshch. lyubit. estestv. antrop. i etnogr., **19** (3): 8.
1932 *Micryphantes rurestris*, — Charitonov, Beilage Ann. Mus. Zool. **32**: 84; Turkestan.
1952 *Micryphantes rupestris*, — Spassky, Entom. Obozr., **32**: 197.
1975 *Meioneta fuscipalpis*, — Andreeva, Fragm. faun., **20** (19): 334.
1976 *Meioneta fuscipalpis*, — Andreeva, Pauki Tadjikistana, : 58.
1979 *Meioneta fuscipalpis*, — Tarabaev, Trudy Kazakh. otd. Vses. Ent. Obshch., : 120.
1984 *Meioneta fuscipalpis*, — Zonstein, Entom, issled. v. Kirghizii, **17**: 146.
1985 *Agyneta* pr. *fuscipalpis*, — Pavlenko, Trudy Zool. Inst. AN SSSR, **139**: 153.
1986 *Agyneta fuscipalpis*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 1♂ (ZMMU), USSR, Kazakhstan, Aral Sea, Barsakelmes Island [1], *Artemisia* grassland, 31.V.1983; leg. T.P. — 1♀ (ZMMU), N-Tien-Shang Mts., Djambul Area, Kindiktas Mts., Kurdai Pass [2], 1200-1400 m, 2.V.1980; leg. S.Z. — 2♂ 3♀ (ZMMU), 1♂, 1♀ (SMF 36651), Turkmenia, Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1200-1300 m, under stones on slope, in crevices, 9. & 10.V.1984; leg. A.T. — 6♂ 8♀ (ZMMU), 2♂ 2♀ (SMF 36652), Uzbekistan, Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Kampyrtepa Valley [46], 1600-1800 m, in grass near spring, 18.-22.V.1984; leg. A.T. — 1♀ (ZMMU), W-Tien-Shang Mts., Tashkent Area, Chatkalsky Mt. Ridge, Chatkal State Reserve [36], 1300 m, *Populus* litter near stream, 16.IX.1983; leg. K.E. — 1♂ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 900-1100 m, 5.VII.1983; leg. S.O. — 3♂ 6♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Santash Valley [13], 2400 m, 22.VII.1983; leg. S.O. — 1♂ 1♀ (ZMMU), Kungey-Alatau Mt. Ridge, Karkara [30], Irisu Valley, 2000-2500 m, 13.VII.1983; leg. S.O. — 7♂ 4♀ (ZMMU), 2♂ 2♀ (SMF 34795), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Junglans regia* forest, litter 24.-27.IX.1983; leg. K.E. — 2♂ 1♀ (ZMMU), Osh Area, near Djelalabad [20], 600-700 m, left bank of Kugart River, semi-desert, V.-VIII.1983; leg. S.Z.

Remarks: Within Middle Asia, this species has hitherto been recorded from the Kyzyl-Kum Desert (Kroneberg 1875, Charitonov 1932, Spassky 1952), various parts of Tadjikistan (Hissarsky Mt. Ridge, Beshkent Valley, Dushanbe, etc.: Andreeva 1975, 1976), N-Tien-Shang (Zailiysky-Alatau & Fergansky Mt. Ridges: Tarabaev 1979, Zonstein 1984), Barsakelmes Island, Aral Sea (Pavlenko 1985), and Repetek, Turkmenia (Tanasevitch & Fet 1986).

Agyneta (Meioneta) kopetdaghensis n. sp.

Figs. 1-5.

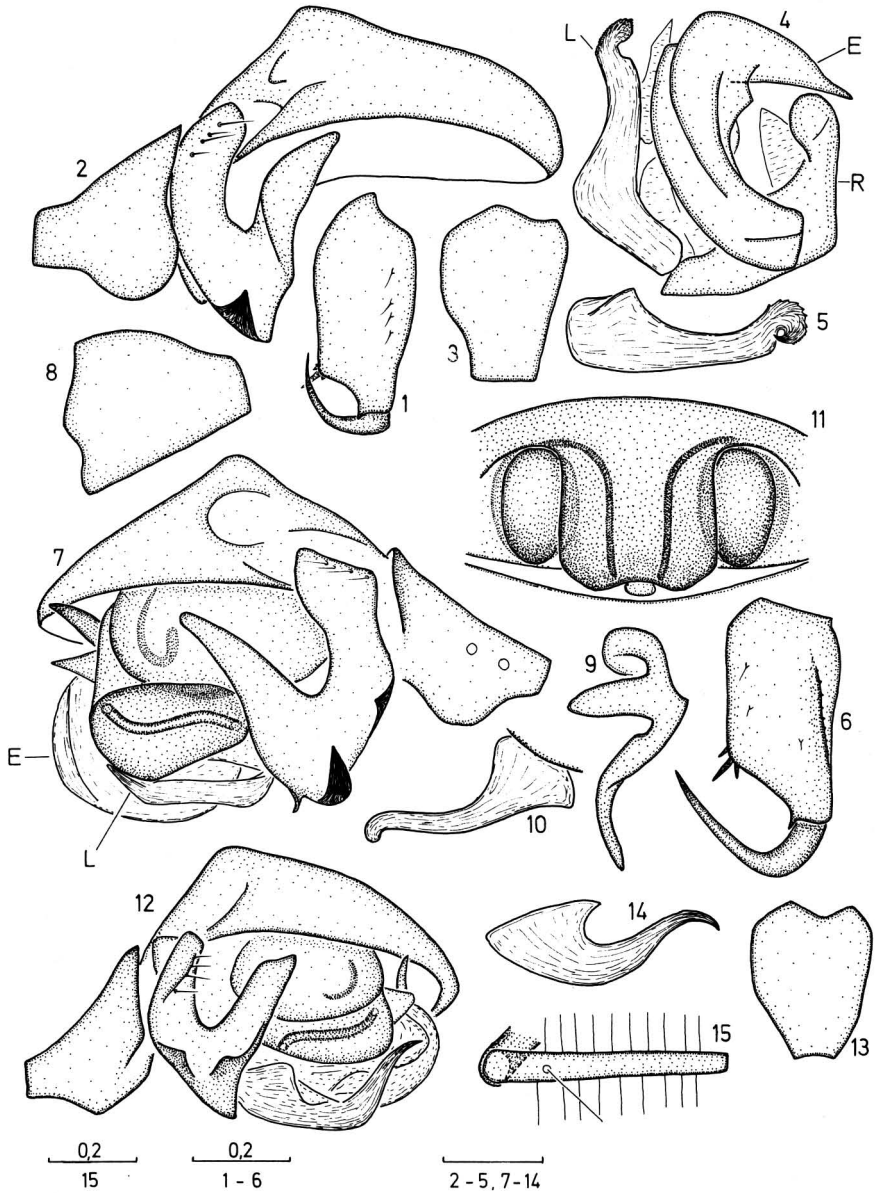
1983 *Meioneta* sp., — Fet, Ent. Obozr., **62** (4): 839.

Holotype: ♂ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mts., Aidere Valley [54], 800 m, *Juglans regia* forest, litter, 11.III.1979; leg. V.F.

Paratypes: 2♂ (ZMMU), 1♂ (SMF 34798) same locality and date as holotype.

Diagnosis: The new species differs well from other members of the subgenus *Meioneta* Hull 1920 primarily by the peculiar lamella characteristica.

Description, ♂ (♀ unknown): Total length 1·75. Carapace: 0·80 long, 0·63 wide, dark brown, with a narrow black margin. PME separated by their 1·5 D.



Figs. 1-15. *Agyneta* sp. — 1-5) *kopetdaghensis* n. sp., ♂ paratype; 6-11) *tianschanica* n. sp., ♂ ♀ paratypes; 12-15) *uzbekistanica,* ♂, Ugamsky Mt. Ridge. — 1, 6) ♂, left chelicera; 2, 12) ♂, right palp; 3, 8, 13) ♂, palpal tibia, dorsal view; 4) ♂, embolic division; 5, 10, 14) ♂, lamella characteristica; 7) ♂, left palp; 9) ♂, paracymbium, ventral view; 11) ♀, epigyne, ventral view; 15) ♂, tibia I, dorsal view.

Chelicerae: 0·35 long, as in Fig. 1. Legs brown. Tibial spines 2.2.2.2. Metatarsi I-III each with a trichobothrium. TmI 0·26. Leg I — 2·74 long (0·75 + 0·18 + 0·70 + 0·63 + 0·48), IV — 2·66 long (0·75 + 0·18 + 0·68 + 0·65 + 0·40). Palp (Figs. 2-5): Cymbium slightly conical. Distal part of paracymbium with a tooth-shaped outgrowth. Lamella characteristica apically unciform, almost ring-shaped, serrate at margin. Distal part of embolus conically elongated. Abdomen: 1·00 long, 0·65 wide, black.

Remarks: This species has hitherto been registered from the Kopetdagh Mts., Turkmenia, as *Meioneta* sp. (Fet 1983).

Agyneta (Meioneta) ressli (Wunderlich 1973).

1973 *Meioneta ressli* Wunderlich, Senckenbergiana biol., **54** (4/6): 414; figs. (♂ ♀).
1986 *Agyneta ressli*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 2♂ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mts., Eldere Valley [54], 800 m, litter, 1.VI.1982; leg. B.Z.

Remarks: Within Middle Asia, this species has heretofore been registered also in Kopetdagh Mt. Ridge (Tanasevitch & Fet 1986). In the USSR it has been recorded only from the Caucasus (Tanasevitch 1987a).

Agyneta (Meioneta) rurestris (C. L. Koch 1836).

1986 *Agyneta rurestris*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Remarks: In Middle Asia, this species is known only from Ashkhabad, Turkmenia (Tanasevitch & Fet 1986). Absent in the materials treated herein.

Agyneta (Meioneta) subnivalis n. sp.

Figs. 16-18.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Tyuya-Ashu Pass [10], 3000-3400 m, 6.-8.VIII.1984; leg. S.Z.

Paratypes: 1♂ (ZMMU), Inner Tien-Shang Mts., Akshiyrak Mt. Ridge, near Meteorological Station "Tian-Shan" [22], 3700-3900 m, 15.-25.VII.1983; leg. B.P. — 2♂ (ZMMU), N-Pamir Mts., Osh Area, N slope of Zaalaisky Mt. Ridge, Bordaba [35], 3500 m, 8. IX.1970; leg. E.A. — 1♂ (ZMMU), Tadjikistan, Pamir-Alai Mts., Turkestansky Mt. Ridge, Kuravli-Sai Valley [58], *Juniperus* forest, under stones, 2400-2700 m, 29.IX.1970; leg. E.A.

Diagnosis: The new species is close to *tianschanica* n. sp. and differs from it by the absence of a tooth-shaped outgrowth on the paracymbium, and pointed lamella characteristica.

Description, ♂ (♀ unknown): Total length 1·43 (holotype — 1·80). Carapace: 0·60 long, 0·50 wide, brownish-black. PME separated by their 1·5 D. Chelicerae: 0·25 long, frontal surface near external margin with a number of small, barely visible denticles. Legs pale greyish-brown. Tibial spines 2.2.2.2. Metatarsi I-III each with a trichobothrium. TmI 0·29. Leg I — 1·46 long (0·38 + 0·15 + 0·35

+ 0·30 + 0·28), IV — 1·53 long (0·40 + 0·15 + 0·38 + 0·35 + 0·25). Palp (Figs. 16-18): Embolus distally curved and conically elongate. Lamella characteristica long, evidently curved, apically pointed. Abdomen: 0·85 long, 0·58 wide, dark grey.

Agyneta (Meioneta) tianschanica n. sp.

Figs. 6-11.

Holotype: ♂ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], Karatoko, 3250 m, dry alpine meadow, under stones, 21.IX.1983; leg. A.R.

Paratypes: 1♂ 2♀ (ZMMU), 1♂ 1♀ (SMF 34799), same locality and date as holotype. — 1♂ 16♀ (ZMMU), 4♀ (SMF 34800), Fergansky Mt. Ridge, near Arslanbob [17], 2200 m, dry subalpine meadow, 1.X.1983; leg. K.E.

Diagnosis: The new species is well distinguishable from congeners, in ♂, by the presence of a large tooth-shaped outgrowth in the distal part of the paracymbium and shape of the lamella characteristica and, in ♀ (despite the fact that the epigyne is typically *Meioneta*-like), by the somewhat angular margins of the posterior part of the scape and well-translucent, paramedian, narrow sperm ducts.

Description, ♂: Total length 1·73. Carapace: 0·78 long, 0·58 wide, greyish-brown. PME separated by their D. Chelicerae 0·35 long, as in Fig. 6. Legs pale brown. Tibial spines 2.2.2.2. Metatarsi I-III each with a trichobothrium. TmI 0·28. Leg I — 2·18 long (0·60 + 0·18 + 0·53 + 0·49 + 0·38), IV — 2·37 long (0·63 + 0·18 + 0·63 + 0·55 + 0·38). Palp (Figs. 7-10): Cymbium poorly conical. Distal part of paracymbium with a large, sclerotized, sharp outgrowth directed dorsad. Lamella characteristica narrow, apically slightly curved and rounded. Abdomen: 1·00 long, 0·70 wide, dark grey.

♀: Total length 2·05. Carapace: 0·88 long, 0·63 wide. PME separated by their D. Chelicerae: 0·35 long, anterior margin with three teeth. Leg I — 2·70 long (0·72 + 0·20 + 0·70 + 0·63 + 0·45), IV — 2·85 long (0·80 + 0·20 + 0·75 + 0·65 + 0·45). TmI 0·34. Abdomen: 1·38 long, 0·95 wide. Body and leg coloration, chaetotaxy as in ♂. Epigyne as in Fig. 11.

Agyneta (Meioneta) uzbekistanica Tanasevitch 1984.

Figs. 12-15.

1984 *Agyneta uzbekistanica* Tanasevitch, Nauchn. Dokl. Vysshei shkoly, Biol., **1984** (5): 51; figs. (♂ ♀).

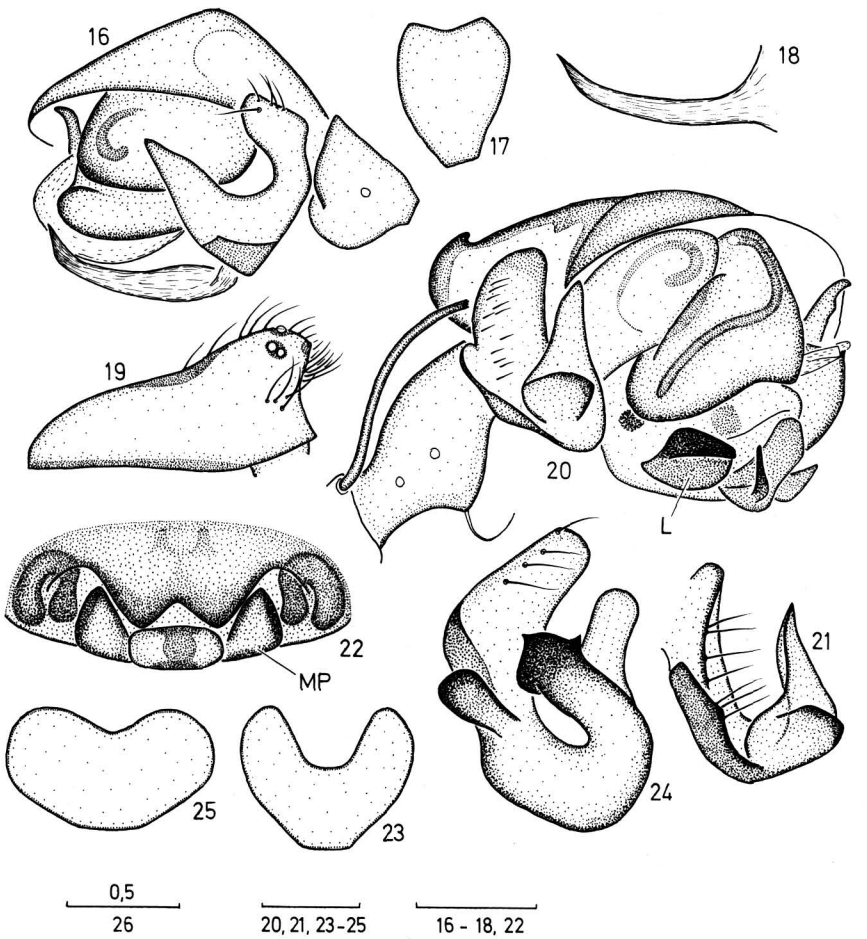
Material: 1 ♂ (ZMMU), Kirghizia, Inner Tien-Shang Mts., Issyk-Kul Area, W-Terskey-Alatau Mt. Ridge, without any locality mentioned, 3600-3800 m, under stones, 18.VI.1969; leg. P.V.

Remarks: This species has hitherto been known only from a single locality in W-Tien-Shang (Ugamsky Mt. Ridge, Kainar-Sai Valley) in Uzbekistan (Tanasevitch 1984). It is well distinguishable from other congeners by the S-shaped lamella characteristica (Fig. 14) and presence of a pro- and retrolateral row of hairs on the male tibia I situated perpendicularly to the main axis of the segment (Fig. 15).

Allomengea dentisetis (Grube 1861).

Material: 1 ♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], *Picea* forest, litter, 2000-2200 m, 30.VIII.1979; leg. S.Z.

Remarks: Being hitherto known but by ♀♀, this species occurs in S-Siberia (Grube 1861: sub *Micryphantes* C. L. Koch 1836; Koch 1879: sub *Linyphia pigra* L. Koch 1879) (s. van Helsdingen 1974), Mongolia [Staręga 1974: sub



Figs. 16-25. *Agyneta subnivalis* n. sp., ♂ paratype (16-18); *Bolyphantes indexoides* n. sp., ♂ ♀ paratypes (19-23); *index* (Thorell 1856), ♂ ♀ from Komi ASSR (24-25). — 16) ♂, left palp; 17) ♂, palpal tibia, dorsal view; 18) ♂, lamella characteristica, ventral view; 19) ♂, carapace; 20) ♂, right palp; 21, 24) ♂, paracymbium; 22) ♀, epigyne; 23, 25) ♀, median plate, ventral view.

Allomengea pigra (L. KOCH 1879)], the USSR Far East (K. ESKOV, pers. comm.) and Kamchatka (SYTSHEVSKAJA 1935: sub *Lepthyphantes fissus* KULCZYŃSKI 1926, ZMMU TA 2350-2353 examined). New for the Middle Asian fauna.

Allomengea scopigera (GRUBE 1859).

Material: 1♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2200 m, *Picea* forest, litter, 30.VIII.1979; leg. S.Z.

Remarks: This species is new for the Middle Asian fauna.

Bolyphantes alticeps (SUNDEVALL 1832).

Material: 12♂ 24♀ (ZMMU), 4♂ 6♀ (SMF 34801), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, *Picea* forest, 1. & 2.IX.1983; leg. Y.M. — 3♂ 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2000-2200 m, *Picea* forest, litter, 30.VIII.1979; leg. S.Z.

Remarks: This species is new for the Middle Asian fauna.

Bolyphantes indexoides n. sp.

Figs. 19-23.

1984 *Bolyphantes luteolus*, — ZONSTEIN, Ent. issled. v Kirghizii, **17**: 146.

Holotype: ♂ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area., Fergansky Mt. Ridge, near Yarodar [17], 1400-1600 m, *Juglans regia* forest, litter, VIII.-X.1984; leg S.Z.

Paratypes: 9♂ 9♀ (ZMMU), 6♂ 6♀ (SMF 34802), same locality and date as holotype. — 1♂ 3♀ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Bolshaya Almatinka Valley [4], 2550 m, 8.IX.1933; leg. V.S. — 1♀ (ZMMU), Zailiysky-Alatau Mt. Ridge, near Medeo [5], 2000 m, 27.VIII.1983; leg. Y.M. — 1♂ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], Orto-Sai Valley, 700-900 m, 7.IV.1984; leg. S.O. — 1♂ 3♀ (ZMMU), 1♂ 2♀ (SMF 34803), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Arslanbob [17], dry subalpine meadow, 2200 m, 1.X.1983; leg. K.E. — 1♀ (ZMMU), Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1500 m, *Juglans regia* forest, litter, 2.V.1983; leg. S.Z. — 3♂ 8♀ (ZMMU), Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1400 m, *Juglans regia* forest, litter, IV.1982; leg. A.T. — 1♀ (ZMMU), Chatkalsky Mt. Ridge, Chatkal State Reserve [36], Bash-Kyzyl-Sai Valley, 1300 m, *Carex* swamp along spring, 19.IX.1983; leg. K.E. — 1♀ (ZMMU), Tadjikistan, Pamir-Alai Mts., Dushanbe Area, Hissarsky Mt. Ridge, Kondara Valley [57], in litter under tree, 27.VII.1948; leg. E.L. — 2♂ 1♀ (ZMMU), W-Pamir Mts., Gorny-Badakhshan Autonomous Region, Darvazsky Mt. Ridge, Khobu-Rubot Pass [62], 3200-3400 m, 24.IX.1970; leg. A.K.

Diagnosis: The new species is very closely related to the Euro-Siberian boreal *index* (THORELL 1856), but differs, in ♂♂, by the shape of the cymbial proximal outgrowth (in *indexoides* n. sp. it is roundly swelled and uncifer, in *index* with two sharp tubercles), of the paracymbium (Figs. 21, 24), of the lamella char-

acteristica (dark, claw-shaped outgrowth in *indexoides* n. sp. is almost twice as short as in *index*). The epigynes in both species are rather similar, but differ well by the shape of the median plate (Figs. 23, 25). Besides, *indexoides* n. sp. is distinguishable from *index* by the chaetotaxy being TiIII: 2-1-1-1 as opposed to TiIII: 2-0-0-1.

Description, ♂: Total length 2·55. Carapace (Fig. 19): 1·25 long, 0·95 wide, yellow, with a darker margin and a dark median stripe abruptly broadening anteriad. PME separated by their 1·5 D. Chelicerae: 0·45 long, anterior margin with two teeth. Legs yellow, sometimes femora and tibiae apically darkened and at midlength with vague greyish rings. Chaetotaxy. FeI: 0-1-0-0; TiI & TiIV: 2-1-1-1, II: 2-0-1-1, III: 2-1-0-1; MtI-IV: 1-0-0-0. Leg I — 6·44 long (1·65 + 0·38 + 1·68 + 1·73 + 1·00), IV — 5·72 long (1·60 + 0·33 + 1·43 + 1·53 + 0·83). Palp (Figs. 20-21): Patella with a thick, long, terminally denticulate seta. Proximal outgrowth of cymbium with an unciform tubercle. Abdomen: 1·48 long, 0·93 wide, dorsally pale, anteriorly with a narrow, grey, median stripe and greyish spots.

♀: Total length 2·88. Carapace: 1·03 long, 0·83 wide. Chelicerae: 0·38 long, anterior margin with three teeth. PME separated by their 1·5 D. Leg I — 5·28 long (1·40 + 0·40 + 1·28 + 1·35 + 0·85), IV — 4·70 long (1·30 + 0·30 + 1·10 + 1·25 + 0·75). Abdomen: 1·95 long, 1·35 wide. Epigyne as in Figs. 22-23. Body and leg coloration, leg chaetotaxy as in ♂.

Remarks: This species has hitherto erroneously been recorded from W-Tien-Shang Mts. (Fergansky Mt. Ridge) by ZONSTEIN (1984) as *Bolyphantes luteolus* (BLACKWALL 1833).

Bolyphantes severtzovi n. sp.

Figs. 26-28.

Holotype: ♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], Chon-Aryk, 1100-1300 m, 27.IV.1983; leg S.O.

Paratypes: 1♀ (ZMMU), near Frunze [8], Kok-Djar, 1000-1300 m, 16.IV.1983; leg. S.O. — 1♀ (ZMMU) near Frunze [8], 800-900 m, 23.V.1979; leg. S.Z. — 1♀ (ZMMU), Frunze Area, Kirghizsky Mt. Ridge, Malinovoye Valley [9], 1700-2000 m, 27.VII.1983; leg. S.O. — 1♀ (ZMMU), Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 4.VII.1985; leg. S.O. — 2♀ (ZMMU), 2♀ (SMF 34804), Kazakhstan, N-Tien-Shang Mts., Djambul Area, Kindiktas Mts., Kurdai Pass [2], 1200-1400 m, 14.IV.1983; leg. S.O. & S.Z.

Derivatio nominis: The new species is gladly named after the prominent Russian naturalist, Prof. N. A. SEVERTZOV, who contributed considerably in the second half of the last century to the knowledge of Middle Asia.

Diagnosis: By the shape of the epigyne, the new species is particularly closely related to *luteolus* (BLACKWALL 1833), but differs by the open aperture, narrower and parabasally thinner scape, as well as by the chaetotaxy, in particular by the presence of only one spine (dorsal) on metatarsi I-IV.

Description, ♀ (♂ unknown): Total length 2·90. Carapace: 1·15 long, 0·80 wide, pale brown, with a dark wide median stripe and dark margin. PME separated by their D. Chelicerae (Fig. 26): 0·45 long, anterior margin with three teeth. Legs pale brown, femora and tibiae at midlength each with a dark ring, proximally and distally darkened. Chaetotaxy. FeI: 0-1-0-0; TiI & TiIV: 2-1-1-1, II: 2-0-1-1, III: 2-1-0-1; MtI-IV: 1-0-0-0(sometimes tibiae may carry additional ventral spines). Leg I — 5·20 long (1·35 + 0·35 + 1·30 + 0·90), IV — 4·55 long (1·30 + 0·30 + 1·10

+ 1·15 + 0·70). Abdomen: 1·85 long, 1·25 wide, dorsally pale, with a dark axial stripe and paramedian spots connected to the stripe with thin bands. Epigyne and vulva as in Figs. 27-28.

Centromerus expertus (O. Pickard-Cambridge 1871).

Material: 1♂ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Pravy Talgar Valley, 1600-1800 m, *Picea* forest, litter, 17.IX.1984; leg. S.O.

Remarks: This species is new for the Middle Asian fauna.

Drapetisca socialis (Sundevall 1832).

Material: 2♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2000-2200 m, *Picea* forest, 18.VIII.1980; leg. S.Z.

Remarks: This species is new for the Middle Asian fauna.

Frontinellina frutetorum (C. L. Koch 1834).

1952 *Linyphia frutetorum,* — Spassky, Ent. Obozr., **32**: 197.

Material: 1♀ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mt. Ridge, Kalaligez [54], 3.V.1982; leg. V.F.

Remarks: This species has hitherto been registered in Middle Asia within the "Turan zoogeographical province", without any locality mentioned (Spassky 1952).

Helophora insignis (Blackwall 1841).

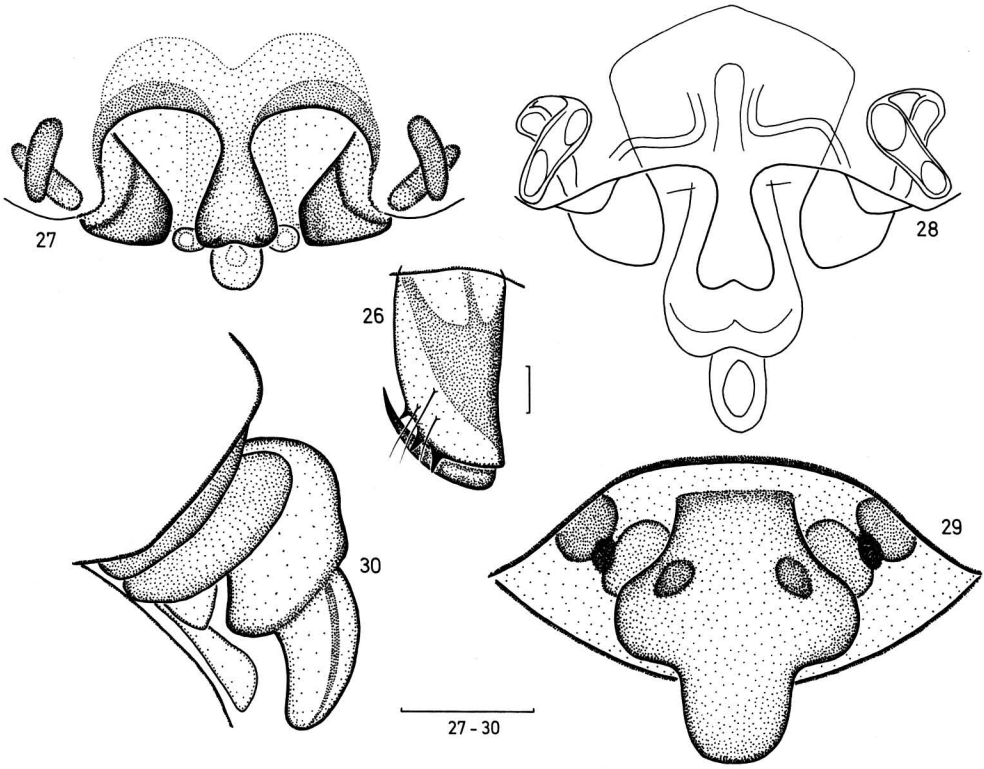
1984 *Helophora insignis,* — Zonstein, Ent. issled. v Kirghizii, **17**: 146.

Remarks: Within Middle Asia, this species is known only from the W-Tien-Shang Mts. (Fergansky Mt. Ridge: Zonstein 1984). Absent in the material treated here.

Lepthyphantes altus Tanasevitch 1986.

1986 *Lepthyphantes altus* Tanasevitch, Senckenbergiana biol., **67** (1/3): 153; figs. (♂♀).

Material: 2♂ 1♀ (ZMMU), 1♂ (SMF 34805), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Sredny Talgar Valley, 1800 m, *Picea* forest, litter, 13.IX.1984; leg. S.O. — 5♀ (ZMMU), 3♀ (SMF 34806), same locality, 1600-1800 m, *Picea* forest, litter, 1.-2.IX.1983; leg. Y.M. — 1♀ (ZMMU), Zailiysky-Alatau Mt. Ridge, Bolshaya Almatinka Valley [4], 3700 m, 6.IX.1933; leg. V.S. — 3♀ (ZIL), same locality, 3.VIII.1935; leg. V.S. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Ala-Archa Valley [9], 2000 m, *Juniperus* sparse stand, 27.IV.1983; leg. S.O. — 1♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, 20



Figs. 26-30. *Bolyphantes severtzovi* n. sp., ♀ paratype (26-28); *Lepthyphantes cruciformis* n. sp., ♀ holotype (29-30). — 26) left chelicera; 27, 29) epigyne, ventral view; 28) vulva, ventral view; 30) epigyne, lateral view.

km S of Pokrovka [23], 2000 m, *Picea* forest, litter, 29.VII.1984; leg. N.T. — 1♀ (ZMMU), Pamir-Alai Mts., Osh Area, Alaisky Mt. Ridge, Shadar-Sai Valley [?], 2400-3200 m, 5.X.1970; leg. E.K.

Remarks: This species has hitherto been known only from the N-Tien-Shang Mts. (Chuyskaya Valley and Alma-Ata State Reserve: TANASEVITCH 1986).

Lepthyphantes badhkyzensis TANASEVITCH 1986.

1986 *Lepthyphantes badhkyzensis* TANASEVITCH, Senckenbergiana biol., **67** (1/3): 143, fig. (♂).

Remarks: This species is known by a single ♂ from Badhkyz (TANASEVITCH 1986). Absent in the material treated here.

Lepthyphantes bipartitus n. sp.

Figs. 31-32.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 4.VII.1985; leg. S.O.

Paratypes: 1♂ (SMF 34807), same locality and data as holotype. — 1♂ (ZMMU), Terskey-Alatau Mt. Ridge, 20 km S of Pokrovka [23], 2000, *Picea* forest, clearing, 28.VII.1984; leg. N.T.

Diagnosis: The new species is characterized by the lack of proximal outgrowth of the cymbium, shape of the distal part of the paracymbium and lamella characteristica.

Description, ♂ (♀ unknown): Total length 2·13. Carapace: 0·95 long, 0·78 wide, pale brown, with a dark margin. PME separated by their D. Chelicerae: 0·38 long, anterior margin with two teeth. Legs pale brown. Chaetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; MtI-IV: 1-0-0-0. TmI 0·22. Legs I — 4·48 long (1·10 + 0·25 + 1·10 + 1·28 + 0·75), IV — 3·62 long (0·93 + 0·25 + 0·83 + 1·03 + 0·58). Palp (Figs. 31-32): Cymbium without proximal outgrowths. Paracymbium toothless. Lamella characteristica distally bipartite, well-sclerotized (particularly the slenderer branch). Abdomen: 1·20 long, 0·70 wide, dorsally pale, in anterior part with a dark triangular spot, in hind part with transverse bands.

Lepthyphantes cinereus Tanasevitch 1986.

1986 *Lepthyphantes cinereus* Tanasevitch, Senckenbergiana biol., **67** (1/3): 150; figs. (♂ ♀).

Material: 2♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, 25 km S of Pokrovka [23], Kochevnik, 2500 m, *Picea* forest, clearing, 30.VIII.1984; leg. N.T. — 2♂ 2♀ (ZMMU), 1♂ 3♀ (SMF 34808), same locality, 2500 m, *Picea* forest, moss, 14.VII.-12.IX.1984; leg. N.T.

Remarks: This species has heretofore been recorded also from the N-Tien-Shang Mts. (Terskey-Alatau Mt., Kungey-Alatau Mt. Ridges) by Tanasevitch (1986).

Lepthyphantes cruciformis n. sp.

Figs. 29-30.

Holotype: ♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Cholpon-Ata Valley [24], 2200-2500 m, *Picea* forest, litter, 6.V.1983; leg. S.O.

Diagnosis: The new species is well distinguishable by the cruciform scape of the epigyne, a character shared only with *triramus* Chamberlin & Ivie 1947 from Alaska. However, it still differs from *triramus* by certain details of the epigyne structure.

Description, ♀ (♂ unknown): Total length 2·60. Carapace: 1·10 long, 0·90 wide, pale brown, with a dark wide median stripe and broad dark margin. PME separated by their 0·75 D. Chelicerae: 0·50 wide, anterior margin with three teeth.

Legs pale brown, joints darkened apically, femora and tibiae each with a dark ring at midlength. Chaetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-2, II: 2-0-1-2, III-IV: 2-1-0-1; MtI-IV: 1-0-0-0. TmI 0·21. Leg I — 5·15 long (1·25 + 0·35 + 1·35 + 1·25 + 0·95), IV — 5·05 long (1·30 + 0·35 + 1·35 + 1·25 + 0·80). Abdomen: 1·75 long, 1·15 wide, dorsally pale, with a dark axial stripe and paramedian spots connected to the stripe with thin bands. Epigyne as in Figs. 29-30.

Lepthyphantes escapus n. sp.

Figs. 33-34.

Holotype: ♀ (ZMMU), USSR, Turkmenia, Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1200 m, valley, under stones, 10.V.1984; leg. A.T.

Paratypes: 2♀ (ZMMU), same locality and data as holotype.

Diagnosis: The new species is perhaps closer to *kuhitangensis* n. sp., the two forms being distinguishable by the hypertrophied posterior part of the scape (cp. with *kronebergi* n. sp. and *turkestanicus* n. sp.), while in *escapus* n. sp. the anterior part of the scape (in its usual sense) is missing, and in *kuhitangensis* n. sp. it is distinct, though considerably reduced. Both species differ in the leg chaetotaxy, absence in *escapus* n. sp. of dark rings on the legs, presence of a bipartite median plate of the epigyne.

Description, ♀ (♂ unknown): Total length 2·18. Carapace: 0·88 long, 0·75 wide, greyish-yellow, with a narrow dark margin. PME separated by their D. Chelicerae: 0·38 long, anterior margin with three teeth. Legs yellow. Chetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; MtI-IV: 1-0-0-0. TmI 0·16. Leg I — 4·58 long (1·25 + 0·28 + 1·20 + 1·05 + 0·80), IV — 4·01 long (1·18 + 0·25 + 0·95 + 1·00 + 0·63). Abdomen: 1·43 long, 1·00 wide, dorsally pale, with a dubious pattern consisting of a dark median stripe and vague spots, ventrally with a dark, broad, median stripe. Epigyne as in Figs. 33-34, anterior part of scape missing, posterior part well-developed, well protruding anteriad. Median plate divided into two sclerites connected by a membrane.

Lepthyphantes hissaricus n. sp.

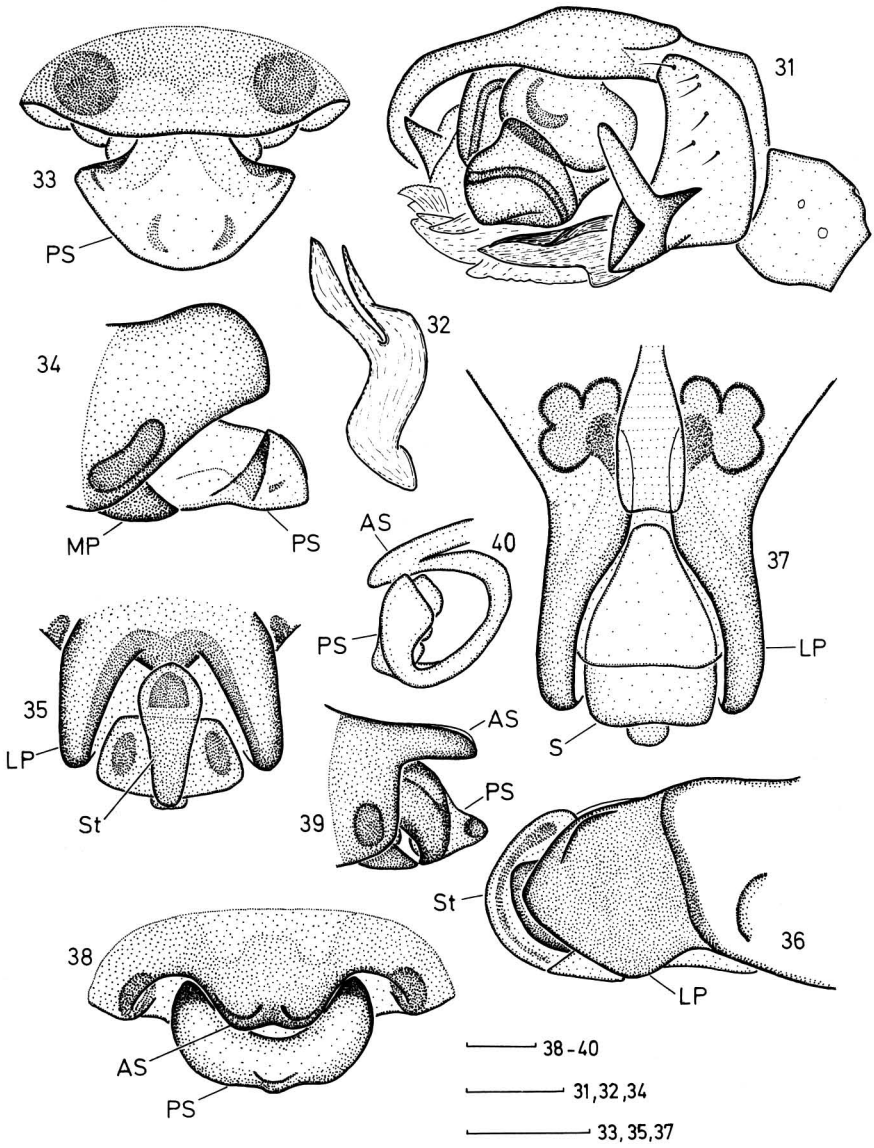
Figs. 35-37.

Holotype: ♀ (ZMMU), USSR, Tadjikistan, Pamir-Alai Mts., Hissarsky Mt. Ridge, bank of Maikhura River [59], 20.VIII.1978; leg. N.P.

Paratype: ♀ (ZMMU), same locality and data as holotype.

Diagnosis: The new species is characterized by the most peculiar shape of the epigyne, i. e. sunk base of the scape, broad stretcher and very well-developed lateral plates.

Description, ♀ (♂ unknown): Total length 2·53. Carapace: 1·00 long, 0·83 wide, greyish-brown. PME separated by their D. Chelicerae: 0·50 long, anterior margin with three teeth. Legs pale brown, with dark rings. Chaetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-1, II: 2-?-?-1, III-IV — ?; MtI-IV: 1-0-0-0. TmI 0·24. Leg I — 4·64 long (1·25 + 0·33 + 1·18 + 1·13 + 0·75), IV — 4·52 long (1·25 + 0·33 +



Figs. 31-40. *Lepthyphantes* sp. — 31-32) *bipartitus* n. sp., ♂ paratype; 33-34) *escapus* n. sp., ♀ paratype; 35-37) *hissaricus* n. sp., ♀ holotype; 38-40) *kuhitangensis* n. sp., ♀ paratype. — 31) ♂, left palp; 32) ♂, lamella characteristica; 33, 35, 38) ♀, epigyne, ventral view; 34, 36, 39) ♀, epigyne, lateral view; 37) ♀, epigyne, dorsal view; 40) ♀, scape, lateral view, lateral plates of the epigyne removed.

1·11 + 1·13 + 0·70). Abdomen: 1·50 long, 0·95 wide, dorsally pale, with a dark axial stripe and dark paramedian spots connected to the stripe with thin bands. Epigyne as in Figs. 35-37.

Lepthyphantes kronebergi n. sp.

Figs. 41-45.

1875 *Linyphia nebulosa,* — KRONEBERG, Izv. Obshch. lyubit. estestv., antrop. i etnogr., **19** (3): 8.
1932 *Lepthyphantes nebulosus,* — CHARITONOV, Beilage Ann. Mus. Zool., **32**: 75 — Turkestan.
1975 *Lepthyphantes* sp. 1, — ANDREEVA, Fragm. faun., **20** (19): 334.
1976 *Lepthyphantes* sp. 1, — ANDREEVA, Pauki Tadjikistana, : 60.
1985 *Linyphia* pr. *tenuipalpis,* — PAVLENKO, Trudy Zool. Inst. AN SSSR, **139**: 153.

Holotype: ♂ (ZMMU), USSR, Uzbekistan, Tashkent [41], in house, 9.X.1977; leg. A.N.

Paratypes: 2♂ 5♀ (ZMMU), 1♂ 1♀ (SMF 34809), same locality and data as holotype. — 3♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], Orto-Sai Valley, 1100 m, 10.II.1983; leg. S.O. — 1♀ (ZMMU), 1♀ (SMF 34810), Frunze Area, Kirghizsky Mt. Ridge, Malinovoye Valley [9], 1500-1800 m, 28.VII.1984; leg. S.O. — 1♀ (ZMMU), between Kirghizsky and Kungey-Alatau Mt. Ridges, Buamskoye Valley [26], 1200 m, 1.V.1984; leg. S.O. — 1♀ (ZMMU), Issyk-Kul Area, Kungey-Alatau Mt. Ridge, near Dolinka [24], 2000 m, 26.VI.1980; leg. S.Z. — 1♀ (ZMMU), Uzbekistan, Samarkand [13], the FEDTSCHENKO Collection TA 1138. — 1♀ (ZMMU), Tadjikistan, Pamir-Alai Mts., Dushanbe Area, Hissarsky Mt. Ridge, Yagnob Valley [57], 2000 m, 27.IX.1970; leg. E.A. — 1♀ (ZMMU), Dushanbe [56], in house, 2.VI.1968; leg. S.R.

Derivatio nominis: The new species is gladly named after the well-known Russian naturalist, A. KRONEBERG, the author of the first fundamental work devoted to Middle Asian spiders.

Diagnosis: The new species joins the *nebulosus*-group and seems especially closely related to *turkestanicus* n. sp., but differs from it by the presence of three conical tubercles on the ♂ palpal tibia (only two in *turkestanicus* n. sp.), short lamella characteristica, and certain details of the epigynal structure in ♀ (shape of the median plates in particular) (Figs. 45, 51). Unlike other members of the *nebulosus*-group, *kronebergi* n. sp. is characterized by the extremely poorly-developed anterior part of the scape and hypertrophied posterior part (AS & PS, resp. in Figs. 43-44), thus making the epigyne highly conspicuous.

Description, ♂: Total length 3·75. Carapace: 1·55 long, 1·20 wide, yellow, with a dark median stripe bifurcating anteriad and irregularly wide, dark margin. Cephalic part of carapace slightly raised. PME separated by their D. Chelicerae: 0·65 long, anterior margin with three teeth. Legs yellow , tibiae and femora with dark rings. Chaetotaxy. FeI: 0-1-0-0; TiI-II: 2-2-2-2, III-IV: 2-1-1-1; MtI-II: 2-1-1-1, III-IV: 1-1-0-0. TmI 0·15. Leg I — 11·00 long, (2·95 + 0·45 + 2·95 + 2·85 +1·80), IV — 9·90 long (2·65 + 0·45 + 2·60 + 2·70 + 1·50). Palp (Figs. 41-42): Tibia with three conical outgrowths: two dorsal ones and a ventro-retrolateral. Paracymbium with a tooth. Lamella characteristica short, broad, distally with three pointed teeth. Abdomen: 2·25 long, 1·30 wide, dorsally pale, with a dark median stripe flanked by larger spots coalescing caudad into transverse bands.

♀: Total length 3·85. Carapace: 1·45 long, 1·10 wide. PME separated by their D. Chelicerae: 0·75 long, anterior margin with three teeth. Leg I — 10·05 long (2·65

+ 0·50 + 2·75 + 2·50 + 1·65), IV — 8·80 long (2·35 + 0·50 + 2·25 + 2·30 + 1·40). Abdomen: 2·50 long, 1·60 wide. Epigyne as in Figs. 43-45. Body and leg coloration, leg chaetotaxy as in ♂.

Remarks: This species has hitherto been registered from Samarkand, Uzbekistan (KRONEBERG 1875, CHARITONOV 1932), Dushanbe, Tadjikistan (ANDREEVA 1975, 1976), and Barsakelmes Island, Aral Sea (PAVLENKO 1985).

Lepthyphantes kuhitangensis n. sp.

Figs. 38-40.

Holotype: ♀ (ZMMU), USSR, Turkmenia, Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1400 m, under stones on slope, 17.V.1985; leg. A.T.

Paratypes: 4♀ (ZMMU), 2♀ (SMF 34811), same locality, 1200 m, under stones near spring, 10.V.1984; leg. A.T. — 1♀ (ZMMU), Uzbekistan, Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Bagly-Dara Valley [45], 1800-1900 m, sparse *Juniperus* forest, in grass, 27.V.1985; leg. A.T. — 4♀ (ZMMU), Kuhitang-Tau Mt. Ridge, Kampyrtepa Valley [46], 1600-1800 m, under stones on slope and in crevices, 15.-21.V.1984; leg. A.T.

Diagnosis: By the structure of the epigyne (poorly developed anterior part of the scape and well developed posterior part), the new species is closely related to both *kronebergi* n. sp. and *turkestanicus* n. sp., but the absence of ventral spines on the tibiae and presence of a single spine of the metatarsi do not permit to see closer affinities of *kuhitangensis* n. sp. with the above two species, nor to incorporate it within the *nebulosus*-group. The unknown ♂ of *kuhitangensis* n. sp. also contributes to its dubious status within *Lepthyphantes*.

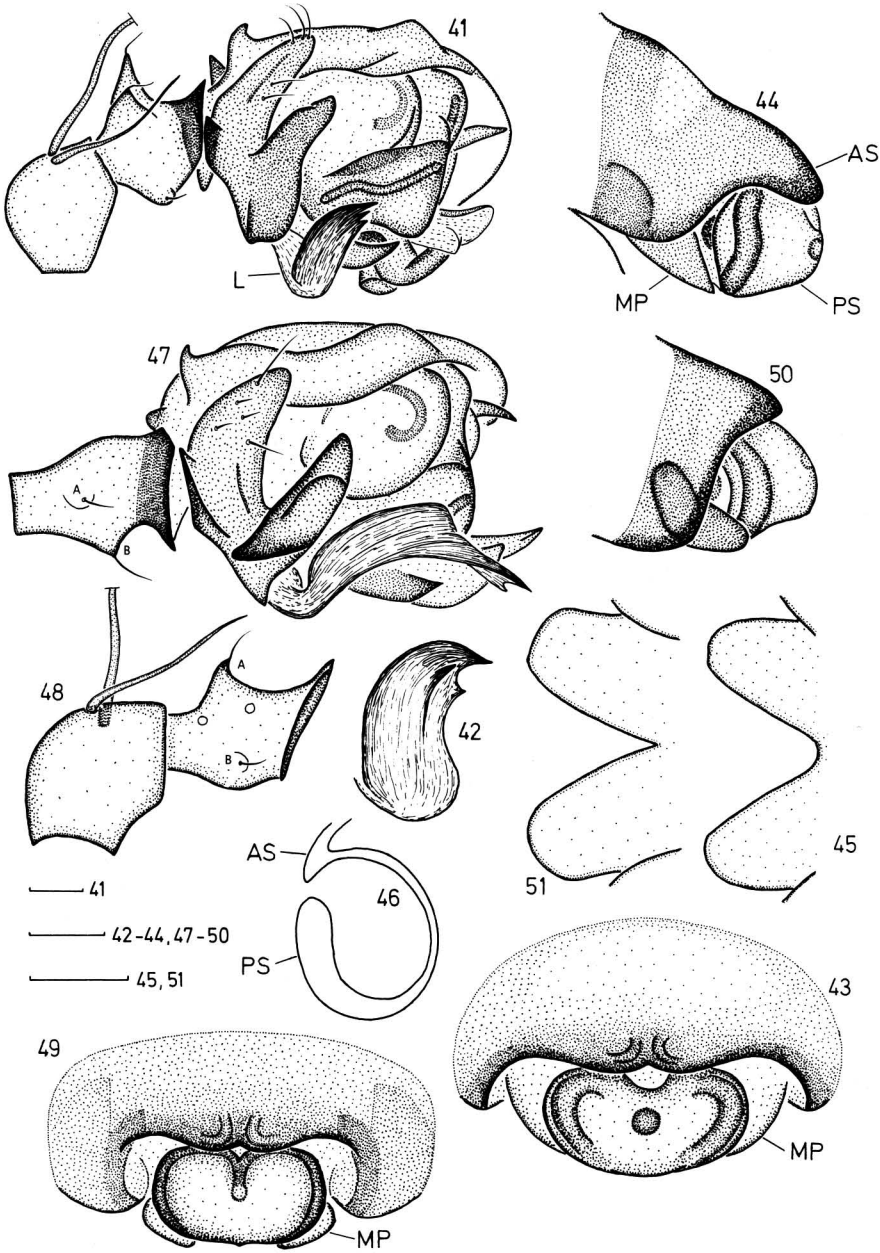
Description, ♀ (♂ unknown): Total length 3·60. Carapace: 1·30 long, 0·95 wide, yellow, with a dark median stripe broadening (sometimes bifurcating) anteriad and dark broad margin. PME separated by their D. Chelicerae: 0·60 long, anterior margin with three teeth. Legs yellow, with dark rings. Chaetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-0, II-III: 2-0-1-0, IV: 2-1-1-0; MtI-IV: 1-0-0-0. TmI 0·15. Leg I — 8·10 long (2·20 + 0·40 + 2·15 + 2·05 + 1·30), IV — 7·05 long (1·90 + 0·35 + 1·80 + 1·90 + 1·10). Abdomen: 2·40 long, 1·65 wide, dorsally pale, with a narrow dark median stripe flanked by spots coalescing caudad into transverse bands. Epigyne as in Figs. 38-40.

Lepthyphantes macer TANASEVITCH 1986.

1986 *Lepthyphantes macer* TANASEVITCH, Senckenbergiana biol., **67** (1/3): 144; figs. (♂♀).

Material: 3♂ 8♀ (ZMMU), 2♂ 3♀ (SMF 34812), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkal Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1300-1500 m, *Juglans regia* forest, litter, 24.IV.1983; leg. A.T.

Remarks: This species has hitherto been known also from the W-Tien-Shang Mts. only (Chatkalsky and Fergansky Mt. Ridges: TANASEVITCH 1986).



Figs. 41-51. *Lepthyphantes* sp. — 41-45) *kronebergi* n. sp., ♂ ♀ paratypes; 47-51) *turkestanicus* n. sp., ♂ ♀ paratypes. — 41, 47) ♂, right palp; 42) ♂, lamella characteristica; 43, 49) ♀, epigyne, ventral view; 44, 50) ♀, epigyne, lateral view; 45, 51) ♀, median plate, ventral view; 46) ♀, schematical section of scape in both *kronebergi* and *turkestanicus*.

Lepthyphantes mengei Kulczyński 1887.

Material: 2♂ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1.-2.IX.1983; leg. Y.M. — 1♀ (SMF 34813), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon Uryukty Valley [25], 1800 m, *Picea* & *Crataegus* litter near stream, 9.IX.1983; leg. A.R. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2100 m, 15.VII.1985; leg. S.Z.

Remarks: This species is new for the Middle Asian fauna.

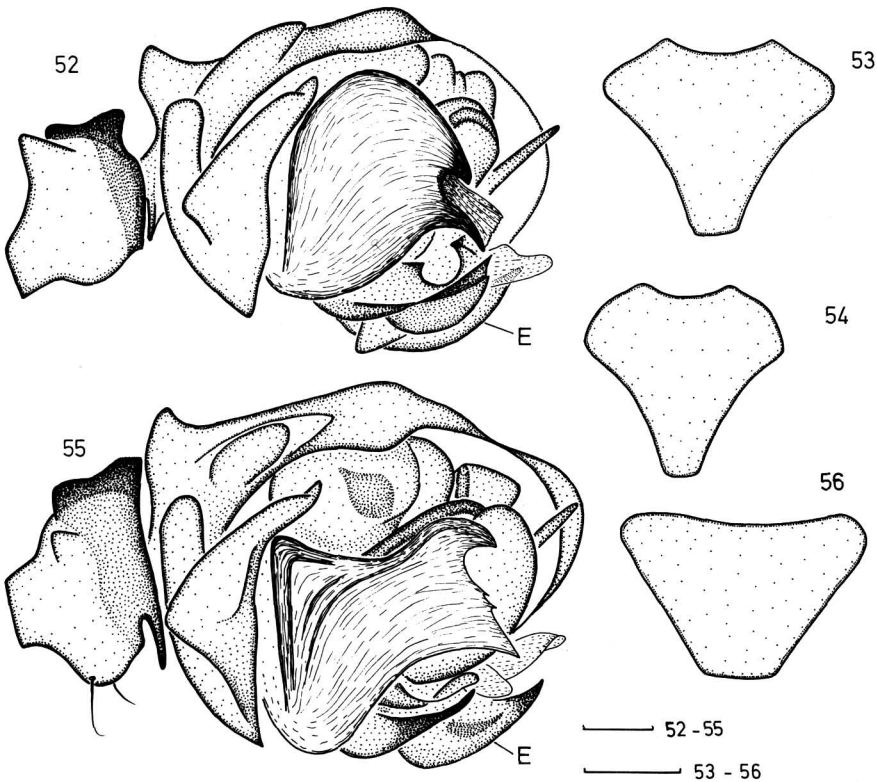
Lepthyphantes nebulosoides Wunderlich 1977.

Figs. 52-54.

1937 *Lepthyphantes nebulosus*, — Vlasov & Sytshevskaja, Trudy Sredneaz. opytn. protivochumn. stantsii AN SSSR, **9**: 250.
1975 *Lepthyphantes nebulosus*, — Andreeva, Fragm. faun., **20** (19): 334.
1976 *Lepthyphantes nebulosus*, — Andreeva, Pauki Tadjikistana, : 59.
1977 *Lepthyphantes nebulosoides* Wunderlich, Senckenbergiana biol., **58** (1/2): 59; figs. (♂♀).
1983 *Lepthyphantes nebulosus*, — Fet, Ent. Obozr., **62** (4): 839.
1984 *Lepthyphantes nebulosus*, — Kuznetsov, Mater. IX Kongr. Vses. Entom. Obshch. (Abstr.), Kiev, **1**: 264.
1984 *Lepthyphantes nebulosus*, — Zonstein, Ent. issled. v Kirghizii, **17**: 146.
1986 *Lepthyphantes nebulosoides*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 4♀ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mts., Aidere Valley [54], 800 m, 26.IV.1985; leg. S.Z. — 2♀ (ZMMU), Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1200-1300 m, under stones on slope, 9.-10.V.1985; leg. A.T. — 2♀ (ZMMU), Kuhitang-Tau Mt. Ridge, near Svintsovy Rudnik [48], 1300 m, in crevices, 11.V.1984; leg. A.T. — 3♀ (ZMMU) Uzbekistan, Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Kampyrtepa Valley [46], 1600-1800 m, in grass near spring, 18.V.1984; leg. A.T. — 1♀ (ZMMU), W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1800 m, *Juniperus* sparse forest, on slope under stones, 22.IV.1982; leg. A.T. — 1♂ 2♀ (ZMMU), 1♂ 2♀ (SMF 34814), Osh Area, Chatkalsky Mt. Ridge, Chatkal State Reserve [36], Bash-Kyzyl-Sai Valley, 1100-1300 m, on slope under stones & in grass near spring, 18.-19.IX.1983; leg. K.E. — 1♂ (ZMMU), Kirghizia, W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, Syuren-Tyube Mts., Telek Valley [19], 1200-1400 m, *Juglans regia* forest, litter, 19.IX.1983; leg. S.Z. — 1♂ (ZMMU), 1♂ 1♀ (SMF 34815), Fergansky Mt. Ridge, near Arslanbob [17], 1500 m, *Juglans regia* forest, litter, 15.X.1983; leg. S.Z. — 1♀ (ZMMU), Pamir-Alai Mts., Osh Area, piedmont Kichik-Alai Mt. Ridge, near Aravan [27], 900-1000 m, Tyuya-Muyun, *Passer* nest, 25.IX.1983; leg. S.R.

Remarks: All the previous records of *nebulosus* (Sundevall 1830) in Middle Asia are erroneous and actually refer to *nebulosoides*. The latter was described by Wunderlich (1977) from "Turkestan", without detailed locality, and seems, indeed, most closely related to *nebulosus*, being its obvious Middle Asian vicariant. The two species are clearly distinguishable by certain structural details of the palpal tibia and lamella characteristica in ♂ (Figs. 52, 55), and by the shape of the epigynal median plate in ♀ (Figs. 53-54, 56).



Figs. 52-56. *Lepthyphantes* sp. — 52-54) *nebulosoides*, ♂ and ♀♀ from different parts of Middle Asia; 55-56) *nebulosus*, ♂ ♀ from Turukhansk, Siberia. — 52, 55) ♂, right palp; 53-54, 56) ♀, median plate, ventral view; 55) median plate, common form in *nebulosoides*.

Lepthyphantes ovtchinnikovi n. sp.

Figs. 57-60.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 11.VIII.1984; leg. S.O.

Paratypes: 4♀ (ZMMU), 1♀ (SMF 34816), same locality and data as holotype.

Derivatio nominis: The new species is gladly named after its collector, Mr. Sergei V. Ovtchinnikov (Frunze).

Diagnosis: The new species is characterized by the peculiar shape of the paracymbium, lamella characteristica and epigyne.

Description, ♂: Total length 2·85. Carapace: 1·35 long, 1·00 wide, pale brown, with a darker margin. Cephalic part slightly elevated. PME separated by their D. Chelicerae 0·65 long. Legs pale brown. Spines mostly torn off, chaetotaxy see in ♀. TmI 0·22. Leg I — 7·35 long (1·85 + 0·35 + 2·00 + 2·05 + 1·10), IV — ?. Palp (Figs. 57-58): Tibia with a rounded ventral outgrowth. Cymbium with

a proximal keel-shaped projection. Distal part of paracymbium deeply bipartite. Lamella characteristica broad, distally between marginal ridges (well-sclerotized) distinctly membranous. Abdomen: 1·55 long, 1·00 wide, dorsally pale, anterior part with a dark median stripe and paramedian spots connected to the stripe with thin bands and turning (coalescing) in posterior part into transverse bands.

♀: Total length 3·05. Carapace: 1·25 long, 1·00 wide. PME separated by their R. Chelicerae: 0·55 long, anterior margin with three teeth. Chaetotaxy: FeI: 0-1-0-0; TiI-II: 2-1-1-4, III-IV: 2-1-1-2; MtI-IV: 1-0-0-0. Leg I — 5·20 long (1·40 + 0·35 + 1·40 + 1·25 + 0·80), IV — 4·80 long (1·35 + 0·35 + 1·20 + 1·15 + 0·75). Abdomen: 2·05 long, 1·30 wide. Epigyne as in Figs. 59-60. Body and leg coloration as in ♂.

Lepthyphantes palaeformis n. sp.

Figs. 61-64.

Holotype: ♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2000-2200 m, *Picea* forest, litter, 30.VIII.1979; leg. S.Z.

Paratypes: 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Chon-Kyzylsu Valley [23], 2600 m, *Picea* forest, moss, 2.IX.1983; leg. A.R. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2100 m, 1.VIII.1980; leg. S.Z. — 2♀ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Sredny Talgar Valley, 1800 m, 18.IX.1984; leg. A.N.

Diagnosis: The new species is close to *nenilini* Tanasevitch 1987 described from the mountainous areas of N-Asia (Kolyma Upland, Cherskogo Mt. Ridge, Djugdjur Mt. Ridge, Putorana Plateau), which in its turn seems particularly closely related to *alpinus* (Emerton 1882) known from N-America, and also from mountainous areas. From both, *palaeformis* n. sp. differs by the broader scape and presence of a good constriction at the scape's base (Tanasevitch 1987c).

Description, ♀ (♂ unknown): Total length 2·45. Carapace: 1·05 long, 0·80 wide, pale brown, with a narrow dark margin. PME separated by their D. Chelicerae: 0·50 long, anterior margin with three teeth. Legs pale brown. Chaetotaxy: FeI: 0-1-0-0; TiI: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; MtI-IV: 1-0-0-0. Leg I — 4·15 long (1·15 + 0·25 + 1·00 + 1·05 + 0·70), IV — 3·45 long (1·00 + 0·25 + 0·80 + 0·90 + 0·50). TmI 0·26. Abdomen: 1·55 long, 1·05 wide, dorsal pattern as in Figs. 63-64. Epigyne as in Figs. 61-62. Scape well-sclerotized, dark, variable in shape.

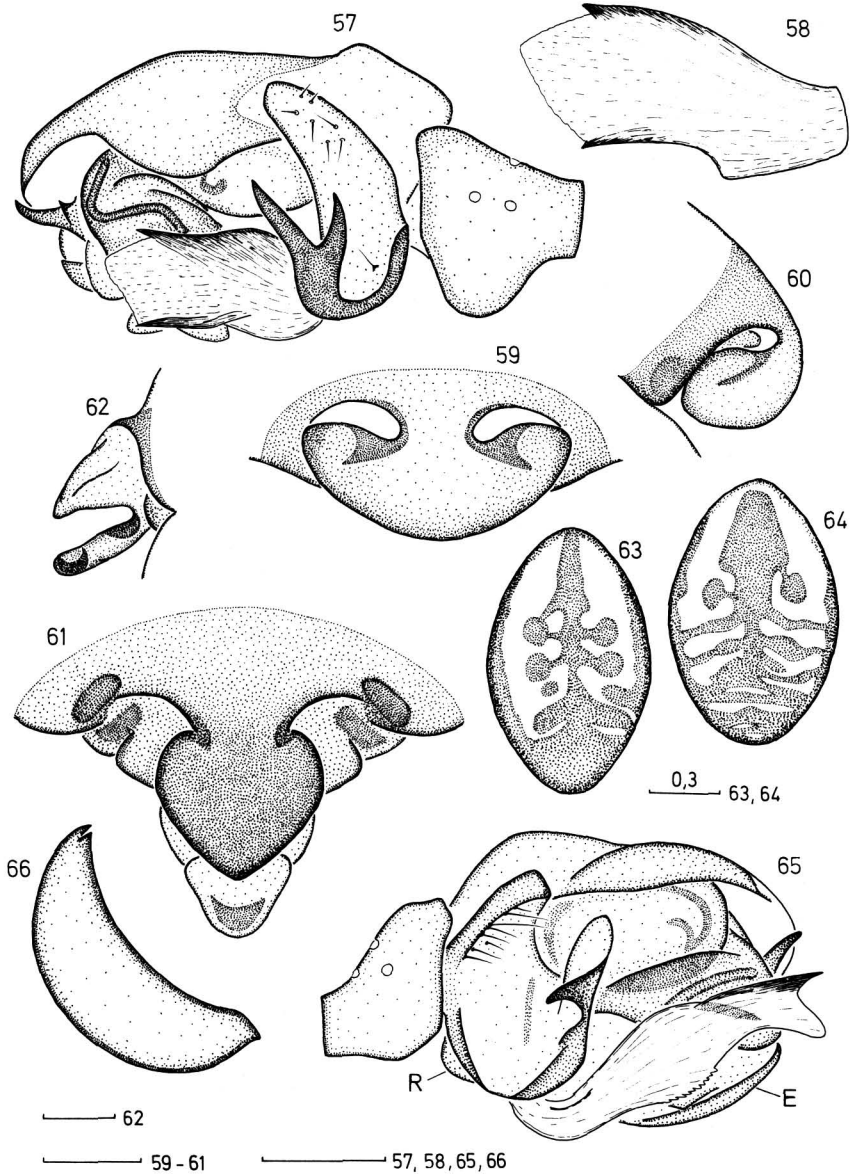
Remarks: This species pair, *nenilini-palaeformis*, also seems a nice example of boreo-alpine pattern in spiders (s. remarks for *Tibioplus tachygynoides* n. sp.).

Lepthyphantes pamiricus n. sp.

Figs. 65-66.

Holotype: ♂ (ZMMU), USSR, Tadjikistan, W-Pamir Mts., Darvazsky Mt. Ridge, Khobu-Rubot Pass [62], 3300 m, 24.X.1970; leg. L.Z.

Diagnosis: This species is characterized by the large embolus and the form of the lamella characteristica.



Figs. 57-66. *Lepthyphantes* sp. — 57-60) *ovtchinnikovi* n. sp., ♂ holotype and ♀ paratype; 61-64) *palaeformis* n. sp., ♀ holotype and ♀ paratype; 65-66) *pamiricus* n. sp., ♂ holotype. — 57) ♂, left palp; 58) ♂, lamella characteristica; 59, 61) ♀, epigyne, ventral view; 60, 62) ♀, epigyne, lateral view; 63-64) ♀, abdomen, dorsal view; 65) ♂, right palp; 66) ♂, embolus, ventral view.

Description, ♂ (♀ unknown): Total length 2·13. Carapace: 0·90 long, 0·70 wide, pale brown. PME separated by their D. Chelicerae 0·40 long. Legs pale brown. Chaetotaxy: FeI: 0-1-0-0; TiI: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; MtI-III: 1-0-0-0. Leg I — 3·59 long (0·95 + 0·28 + 0·98 + 0·80 + 0·58), IV — 3·64 long (0·95 + 0·25 + 0·98 + 0·88 + 0·58). TmI 0·22. Palp (Figs. 65-66): Cymbium without outgrowths. Paracymbium toothless. Embolus large. Abdomen: 1·25 long, 0·88 wide, grey.

Lepthyphantes perfidus Tanasevitch 1985.

Figs. 67-71.

1985 *Lepthyphantes perfidus* Tanasevitch, Ent. Obozr., **64** (4): 847; figs. (♂ ♀).

Material: 1♀ (ZMMU), USSR, Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1400 m, *Juglans regia* forest, litter, 31.III.1983; leg. S.O. — 1♀ (ZMMU), 1♀ (SMF 34817), Chatkalsky Mt. Ridge, mouth of Chatkal River [38], 1300 m, under stones on slope, 14.IV.1982; leg. A.T. — 1♀ (ZMMU), Namangan Area, Kuraminsky Mt. Ridge, Kamchik-Sai Valley [39], 1800 m, 11.IX.1985; leg. S.O.

Remarks: This species has just been described from the W-Tien-Shang Mts. (Chatkalsky and Ugamsky Mt. Ridges: Tanasevitch 1985).

Lepthyphantes pinicola Simon 1884.

Material: 1♀ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mts., Ridge, Aidere Valley [54], 800 m, Sapar-Bakhar, 28.-29.IV.1985; leg. S.Z.

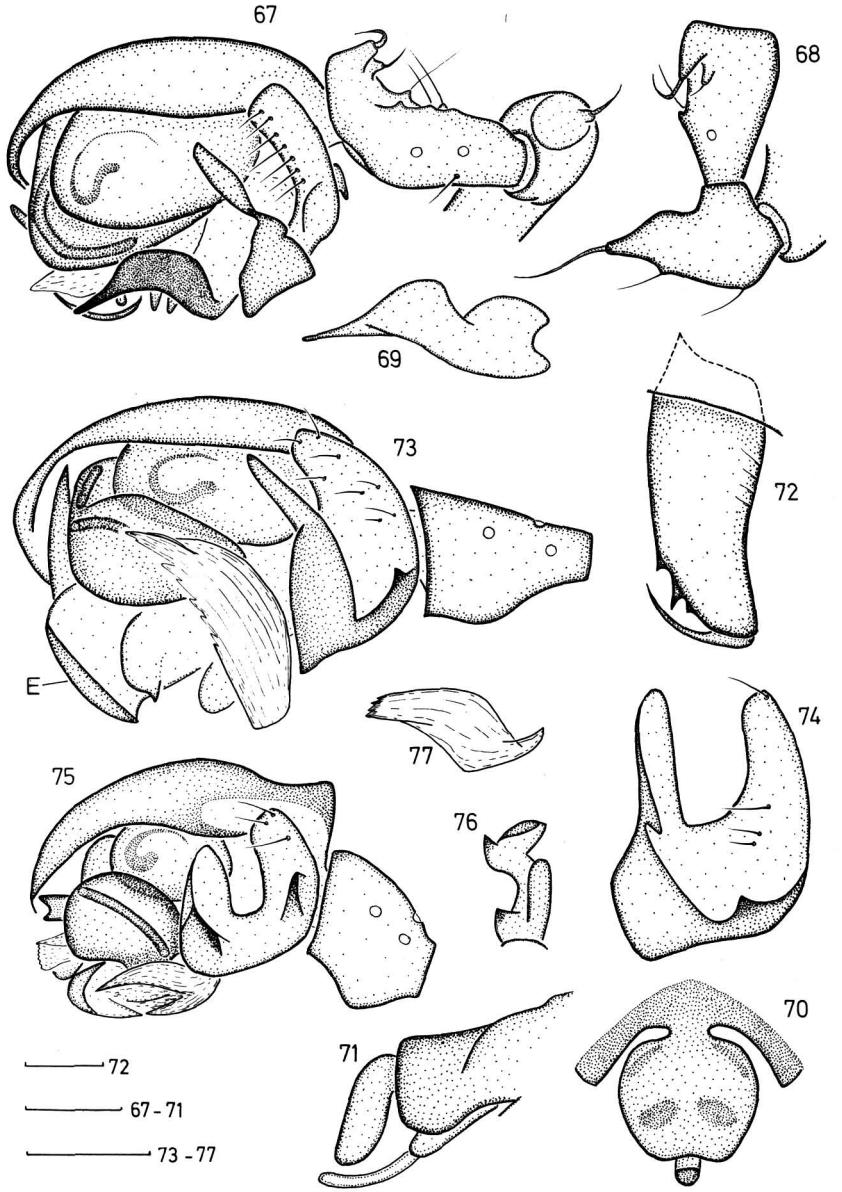
Remarks: This species has hitherto been registered only in Middle and S-Europe. Its discovery in Middle Asia permits to characterize its distribution pattern as Ancient Mediterranean. New for the USSR fauna.

Lepthyphantes plumatus Tanasevitch 1986.

1986 *Lepthyphantes plumatus* Tanasevitch, Senckenbergiana biol., **67** (1/3): 146; figs. (♂ ♀).

Material: 1♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], Chon-Aryk, 1100-1300 m, 20.III.1985; leg. S.O. — 2♂ 2♀ (ZMMU), W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], Bakai Valley, 1600 m, *Juglans regia* forest, litter, 14.VII.1983; leg. K.M. — 1♂ 5♀ (ZMMU), Fergansky Mt. Ridge, 2500 m, upper reaches of Arslanbob River [17], subalpine meadow, in grass, 24.VII.1983; leg. S.Z. — 20♂ 18♀ (ZMMU), 7♂ 7♀ (SMF 34818), Fergansky Mt. Ridge, near Yarodar [17], *Juglans regia* forest, 1400-1600 m, VIII.-X.1984; leg. S.Z. — 11♂ 14♀ (ZMMU), Fergansky Mt. Ridge, near Yarodar [17], Zindan Mt., 1800-2000 m, *Juglans regia* forest, litter, 7.X.1983; leg. S.Z.

Remarks: This species has heretofore been registered only from the W-Tien-Shang Mts. (Fergansky and Chatkalsky Mt. Ridges: Tanasevitch 1986).



Figs. 67-77. *Lepthyphantes* sp. — 67-71) *perfidus*, ♂ ♀ from Kara-Djargach, Kirghizia; 72-74) *potanini* n. sp., ♂ paratype; 75-77) *subtilis* n. sp., ♂ paratype. — 67, 73, 75) ♂, left palp; 68) ♂, palpal patella & tibia, lateral view; 69, 77) ♂, lamella characteristica; 70-71) ♀, epigyne, ventral & lateral views, respect.; 72) ♂, left chelicera; 74, 76) ♂, paracymbium, lateral & dorsal views, respect.

Lepthyphantes potanini n. sp.

Figs. 72-74.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 11.VIII.1984; leg. S.O.

Paratype: ♂ (ZMMU), Terskey-Alatau Mt. Ridge, Barskaun Valley [28], 2500 m, 13.VIII.1984; leg. S.O.

Derivatio nominis: The new species is gladly named after the prominent Russian naturalist, G. Potanin (1835—1920), who contributed very much to the nature research of Central Asia.

Diagnosis: The new species is characterized by the peculiar shape of the chelicerae, paracymbium and lamella characteristica. The ♀ sex being unknown and leg chaetotaxy obscure (spines broken off), it is impossible at the moment to make a better allocation within the genus.

Description, ♂ (♀ unknown): Total length 1·88. Carapace: 0·90 long, 0·73 wide, pale brown. PME separated by their R. Chelicerae 0·33 long, as in Fig. 72. Legs pale brown, spines torn off. Leg I — 4·91 long (1·30 + 0·30 + 1·28 + 1·20 + 0·83), IV — 4·79 long (1·28 + 0·28 + 1·28 + 1·25 + 0·70). TmI 0·17. Palp as in Figs. 73-74. Abdomen: 1·03 long, 0·65 wide, grey.

Lepthyphantes rupeus Tanasevitch 1986.

1986 *Lepthyphantes rupeus* Tanasevitch, Senckenbergiana biol., **67** (1/3): 158; figs. (♂).

Remarks: At present, this species is known but by a single ♂ from the N-Tien-Shang Mts. (Kindiktas Mts.: Tanasevitch 1986). Absent in the materials treated herein.

Lepthyphantes sacer Tanasevitch 1986.

1986 *Lepthyphantes sacer* Tanasevitch, Senckenbergiana biol., **67** (1/3): 156; figs. (♂♀).

Remarks: This species is known only from the alpine belt (3000-3200 m) of the N- and C-Tien-Shang Mts. (Kirghizsky and Terskey-Alatau Mt. Ridges: Tanasevitch 1986). Absent in the materials treated herein.

Lepthyphantes solivagus Tanasevitch 1986.

1986 *Lepthyphantes solivagus* Tanasevitch, Senckenbergiana biol., **67** (1/3): 154; figs. (♂).

Remarks: This species is known by a single ♂ from the N-Tien-Shang Mts. (Kungey-Alatau Mt. Ridge: Tanasevitch 1986). Absent in the materials treated herein.

Lepthyphantes spasskyi Tanasevitch 1986.

1985 *Lepthyphantes spasskyi* Pavlenko, Trudy Zool. Inst. AN SSSR, **139**: 153 [nomen nudum].
1986 *Lepthyphantes spasskyi* Tanasevitch, Senckenbergiana biol., **67** (1/3): 140.

Remarks: This species was described from E-Ukraine, W-Kazakhstan (Tanasevitch 1986), and recorded from Barsakelmes Island, Aral Sea, W-

Kazakhstan (PAVLENKO 1985). *L. spasskyi* joins the *keyserlingi*-group created by WUNDERLICH (1985), and seems to be very closely related to both of its constituent species, i. e. *keyserlingi* AUSSERER 1867 and *quadrimaculatus* KULCZYŃSKI 1898.

Lepthyphantes subtilis n. sp.

Figs. 75-77.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Malinovoye Valley [8], 1700-2000 m, 20.IX.1984; leg. S.O.

Paratypes: 1♂ (ZMMU), same locality and data as holotype. — 1♂ (SMF 36654), Kirghizsky Mt. Ridge, near Frunze [8], Chon-Aryk Valley, 1100-1300 m, 6.V.1985; leg. S.O.

Diagnosis: Besides the shape of both paracymbium and lamella characteristica, the new species is conspicuous in having the trichobothrium on metatarsus IV. The latter character is very seldom met with in *Lepthyphantes*. I know only two examples of the presence of trichobothrium IV, i. e. in the Japanese *azumiensis* OI 1980 and a specimen of the Nepalese *numilionis* TANASEVITCH 1987.

Description, 1♂ (♀ unknown): Total length 1·80. Carapace: 0·83 long, 0·70 wide brown. PME separated by their D. Chelicerae 0·38 long. Legs pale brown. Chaetotaxy. FeI: 0-0-0-0; TiI-II: 2-1-1-0, III-IV: 2-0-0-0 (in one paratype — TiIII: 2-1-1-0); MtI-IV: 1-0-0-0. All metatarsi with a trichobothrium! TmI 0·16. Leg I — 3·59 long (0·90 + 0·25 + 0·93 + 0·93 + 0·58), IV — 3·46 long (0·90 + 0·25 + 0·90 + 0·88 + 0·53). Palp as in Figs. 75-77. Abdomen: 1·03 long, 0·70 wide, dorsally dark, laterally pale.

Lepthyphantes supremus TANASEVITCH 1986.

1986 *Lepthyphantes supremus* TANASEVITCH, Senckenbergiana biol., **67** (1/3): 152; figs. (♂ ♀).

Remarks: At present, this species is known only from the high altitudes (3200 m) of the C-Tien-Shang Mts. (Terskey-Alatau Mt. Ridge, Sary-Djaz River flow: TANASEVITCH 1986). Absent in the materials treated herein.

Lepthyphantes tchatkalensis TANASEVITCH 1983.

1983 *Lepthyphantes tchatkalensis* TANASEVITCH, Zool. Zh., **62** (12): 1790; figs. (♂ ♀).

Material: 1♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1500 m, *Picea* forest, litter, 1.V.1983; leg. A.T. — 2♀ (ZMMU), Fergansky Mt. Ridge, near Yarodar [17], 1400 m, dry limestone rocks, in crevices and under stones, 30.IX.1983. — 4♀ (ZMMU), 1♂ 4♀ (SMF 34820), Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Juglans regia* forest, litter, V.-VIII.1983; leg. S.Z. — 1♀ (ZMMU), N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Cholpon-Ata Valley [24], 2000-2500 m, *Picea* forest, litter, 6.V.1983; leg. S.O. — 1♀ (ZMMU), Frunze Area, Kirghizsky Mt. Ridge, Malinovoye Valley [9], 1700-2000 m, 28.VII.1984; leg. S.O.

Remarks: This species has hitherto been known only from the W-Tien-Shang Mts. (Chatkalsky Mt. Ridge: TANASEVITCH 1983).

Lepthyphantes tenuis (Blackwall 1852).

1975 *Lepthyphantes tenebricola,* — Andreeva, Fragm. faun., **20** (19): 334.
1975 *Lepthyphantes* sp. 2, — Andreeva, Fragm. faun., **20** (19): 334.
1975 *Linyphia* sp. 1, — Andreeva, Fragm., faun., **20** (19): 335.
1976 *Lepthyphantes tenebricola,* — Andreeva, Pauki Tadjikistana, : 59.
1976 *Lepthyphantes* sp. 2, — Andreeva, Pauki Tadjikistana, : 60.
1976 *Linyphia* sp. 1, — Andreeva, Pauki Tadjikistana, : 60.
1983 *Lepthyphantes tenebricola,* — Fet, Ent. Obozr., **62** (4): 839.
1984 *Lepthyphantes tenuis,* — Zonstein, Ent. issled. v Kirghizii, **17**: 146.
1986 *Lepthyphantes tenuis,* — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 1♂ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Djambul Area, Kindiktas Mts., near Georgievka [3], 600 m, 11.VI.1983; leg. S.O. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2000-2500 m, *Picea* forest, litter, 21.VI.1983; leg. S.O. — 5♀ (ZMMU), Frunze Area, Kirghizsky Mt. Ridge, Issyk-Ata Valley [11], 1700 m, 24.VI.1984; leg. S.O. — 4♂ 15♀ (ZMMU), W-Tien-Shang Mts., Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1300-1500 m, *Juglans regia* forest, litter, 29.IV.-4.V.1983; leg. A.T. & S.Z. — 12♂ 21♀ (ZMMU), 10♂ 10♀ (SMF 34821), Fergansky Mt. Ridge, near Yarodar [17], 1400-1600 m, *Juglans regia* forest, litter, VIII.-X.1984; leg. S.Z. — 33♂ 48♀ (ZMMU), Fergansky Mt. Ridge, near Yarodar [17], Zindan Mt., 2000 m, *Juglans regia* forest, litter, 7.X.1983; leg. S.Z. — 2♂ (ZMMU), Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Chatkalsky Mt. Ridge, Chatkal State Reserve [36], Bash-Kyzyl-Sai Valley, in grass near spring, 19.IX.1983; leg. K.E. — 18♀ (ZMMU), 11♀ (SMF 34822), Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, *Juglans regia* forest, litter, 22.-25.IV.1982; leg. A.T. — 2♀ (ZMMU), near Tashkent [41], bank of Chirchik River, under stones, 7.IV.1982; leg. A.T. — 1♀ (ZMMU), Namangan Area, Kuraminsky Mt. Ridge, Kamchik-Sai Valley [39], 1800 m, 11.IV.1985; leg. S.O. — 9♂ 10♀ (ZMMU), Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Kampyrtepa Valley [46], 1400-1800 m, in grass and under stones near stream, 18.-22.V.1984; leg. A.T. — 4♂ 9♀ (ZMMU), 5♂ 4♀ (SMF 34823), Kuhitang-Tau Mt. Ridge, Bagly-Dara Valley [45], 1600-1800 m, litter near spring, 26.V.1985; leg. A.T. — 1♀ (ZMMU), Turkmenia, C-Kopetdagh Mts., bank of Firyuzinka River [53], in grass, 13.VI.1929; leg. V.S. — 3♀ (ZMMU), W-Kopetdagh Mts., Aidere Valley [54], 1000 m, 30.IV.1985; leg. S.Z.

Remarks: Within Middle Asia, this species has hitherto been known from the Pamir-Alai Mts., (Ramit, Dushanbe: Andreeva 1975, 1976), the W-Kopetdagh Mts. (Fet 1983, Tanasevitch & Fet 1986), and the N-Tien-Shang Mts. (Fergansky & Chatkalsky Mt. Ridges: Zonstein 1984).

Lepthyphantes tienschangensis Tanasevitch 1986.

1986 *Lepthyphantes tienschangensis* Tanasevitch, Senckenbergiana biol., **67** (1/3): 149; figs. (♂ ♀).

Material: 6♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1. & 2.IX.1983; leg. Y.M. — 2♂ 3♀ (ZMMU), Alma-Ata State Reserve [4], Sredny Talgar Valley, 1840 m, 13.IX.1984; leg. S.O. — 2♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2100 m, 15.VII.1985; leg. S.Z. — 1♂ 2♀ (ZMMU), Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2500-2700 m, *Picea* forest, litter, 18.VII.1984; leg. S.O. — 1♂ 2♀ (ZMMU), Terskey-Alatau Mt. Ridge, 25 km

S of Pokrovka [23], 2500-2800 m, *Picea* forest, moss 20.-31.VIII.1984; leg. N.T. — 1♂ (SMF 34824), Terskey-Alatau Mt. Ridge, Barskaun Valley [28], 2000 m, 12.VIII.1984; leg. S.O. — 6♀ (ZMMU), 1♂ 2♀ (SMF 34825), Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 6.VII.1985; leg. S.Z.

Remarks: This species has also hitherto been known from the N-Tien-Shang Mts. (Terskey-Alatau, Kirghizsky and Zailiysky-Alatau Mt. Ridges) (s. TANASEVITCH 1986).

Lepthyphantes turanicus TANASEVITCH & FET 1986.

Figs. 78-82.

1980 *Lepthyphantes* sp. OVTSHARENKO & FET, Ent. Obozr., **59** (2): 444.
1986 *Lepthyphantes turanicus* TANASEVITCH & FET, Izv. Akad nauk Turkmen. SSR, Biol., **1986** (1): 34; figs. (♂♀).

Material: 2♂ 1♀ (ZMMU), USSR, Turkmenia, Tuarkyr Plateau, Kafigshem Mt. Ridge [55], 41°00'N, 55°00'E, 5.II.1982; leg. V.F. — 3♀ (ZMMU), 2♂ (SMF 34826), C-Kopetdagh Mts., Firyuza [53], 7.-16.II.1979; leg. S.K. — 1♂ (ZMMU), W-Kopetdagh Mts., Aidere Valley [54], 1000 m, *Artemisia* grassland, 9.-20.I.1979; leg. T.S. — 1♀ (ZMMU), Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Svintsovy Rudnik [48], 1300 m, valley, under stones on slope, 11.V.1984; leg. A.T.

Remarks: This species has also hitherto been known only from Turkmenia (Kafigshem Mt. Ridge and Badhkyz Plateau: OVTSHARENKO & FET 1980, TANASEVITCH & FET 1986).

Lepthyphantes turkestanicus n. sp.

Figs. 47-51.

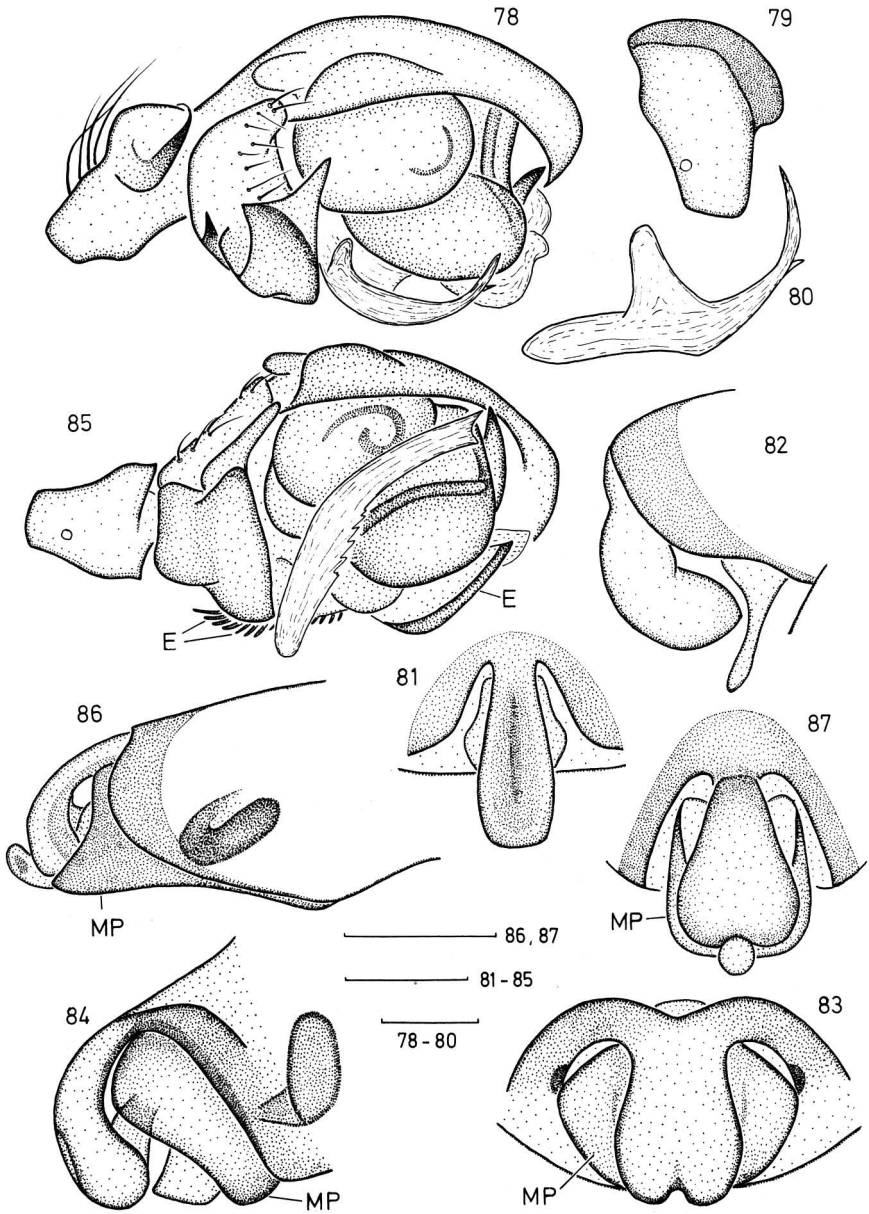
Holotype: ♂ (ZMMU), USSR, Turkmenia, Chardjou Area, E-Karakum Desert, Amudarya River, near Farab [50], Nargyz Island, 9.IV.1983; leg. S.A.

Paratypes: 2♀ (ZMMU), 1♀ (SMF 34827), same locality and data as holotype. — 1♂ 2♀ (ZMMU), same locality, 17.IV.1983; leg. S.A.

Diagnosis: The new species joins the *nebulosus*-group and is especially closely related to *kronebergi* n. sp. (see above).

Description, ♂: Total length 3·35. Carapace: 1·55 long, 1·20 wide, yellow, with a dark median stripe broadening (sometimes bifurcating) anteriad and broad dark margin. Cephalic part of carapace slightly raised. PME separated by their 0·75 D. Chelicerae 0·55 long. Legs torn off. Palp (Figs. 47-48): Tibia with a dorsal and a retrolateral conical tubercle (A & B in Figs. 47-48). Cymbium with a proximal uncus. Paracymbium and lamella characteristica well-sclerotized. Abdomen: 1·80 long, 1·10 wide, dorsally pale, with a grey pattern consisting of a median stripe flanked by larger spots coalescing caudad into transverse bands.

♀: Total length 3·08. Carapace: 1·50 long, 1·20 wide. PME separated by their D. Chelicerae: 0·65 long, anterior margin with three teeth. Legs yellow, with dark rings. Chaetotaxy. FeI: 0-1-0-0; TiI-II: 2-2-2-2, III-IV: 2-1-1-1; MtI-III: 1-1-1-1, IV: 1-1-0-0. Leg I — 10·00 long (2·70 + 0·50 + 2·70 + 2·50 + 1·60), IV — 8·45 long (2·40 + 0·40 + 2·10 + 2·25 + 1·30). TmI 0·15. Abdomen: 2·40 long, 1·50 wide. Epigyne as in Figs. 49-51. Body and leg coloration as in ♂.



Figs. 78-87. *Lepthyphantes* sp. — 78-82) *turanicus,* ♂ ♀ from Kopetdagh; 83-84) *ultimus* n. sp., ♂ holotype; 85-87) *uzbekistanicus,* ♂ ♀ from Aravan, Kirghizia. — 78, 85) ♂, right palp; 79) ♂, palpal tibia, dorsal view; 80) ♂, lamella characteristica; 81, 83, 87) ♀, epigyne, ventral view; 82, 84, 86) ♀, epigyne, lateral view.

Lepthyphantes ultimus n. sp.

Figs. 83-84.

Holotype: ♀ (ZMMU), Tadjikistan, Pamir-Alai Mts., Leninabad Area, Turkestansky Mt. Ridge, upper reaches of Kuravli River, Kuravli-Sai Valley [58], 3000-3200 m, 29.VI.1970; leg. E.A.

Diagnosis: This species is characterized by the shape of the scape and well developed median plate, which almost entirely covers the aperture.

Description, ♀ (♂ unknown): Total length 3·05. Carapace: 1·10 long, 0·90 wide, brown, with a narrow dark margin. PME separated by their 0·75 D. Chelicerae 0·48 long. Legs pale brown, femora and tibiae at midlength each with a dark ring, proximally and distally darkened. Chaetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-1, II: 2-0-1-1, III: 2-0-0-1, IV: 2-0-0-0; MtI-IV: 1-0-0-0. Leg I — 5·85 long (1·60 + 0·35 + 1·55 + 1·45 + 0·90), IV — 4·95 long (1·40 + 0·30 + 1·05 + 1·35 + 0·85). TmI 0·19. Abdomen: 2·25 long, 1·14 wide, dorsally pale, with a dark axial stripe and paramedian spots connected to the stripe with thin bands. Epigyne as in Figs. 83-84.

Lepthyphantes uzbekistanicus Tanasevitch 1983.

Figs. 85-87, 88.

1983 *Lepthyphantes uzbekistanicus* Tanasevitch, Zool. Zh., **62** (12): 1788; figs. (♂ only!) [nec ♀].

Material: 1♂ 2♀ (ZMMU), USSR, Kirghizia, Pamir-Alai Mts., Osh Area, foothills of Kichik-Alai Mt. Ridge, near Aravan [27], Tyuya-Muyun, 900-1000 m, *Passer* nest, 25.IX.1983; leg. S.R. — 1♂ 2♀ (SMF 34828), Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1300 m, *Juglans regia* forest, litter, IV.1982; leg. A.T. — 1♀ (ZMMU), Pamir-Alai Mts., Surkhandarya, Baisun-Tau Mt. Ridge, Amirtemir Valley [44], 4.VII.1966; leg. E.A.

Redescription, ♀: Total length 1·66. Carapace: 0·68 long, 0·53 wide, yellowish-grey. PME separated by their D. Chelicerae: 0·28 long, anterior margin with three teeth. Legs yellow. Chaetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; MtI-III: 1-0-0-0. Leg I — 2·79 long (0·70 + 0·23 + 0·70 + 0·63 + 0·53), IV — 2·97 long (0·80 + 0·23 + 0·73 + 0·73 + 0·48). TmI 0·22. Abdomen: 1·00 long, 0·60 wide. Epigyne as in Figs. 86-87.

Remarks: This species has been described from W-Tien-Shang Mts. (Ugamsky Mt. Ridge: Tanasevitch 1983). The ♀ of *uzbekistanicus* sensu mihi (1983) has turned out to belong to *zonsteini* n. sp. (see below), thus a redescription of ♀ *uzbekistanicus* is given here.

Lepthyphantes vaginatus Tanasevitch 1983.

Figs. 89-90.

1983 *Lepthyphantes vaginatus* Tanasevitch, Zool. Zh., **62** (12): 1786; figs. (♂ ♀).
1984 *Lepthyphantes vaginatus*, — Zonstein, Ent. issled. v Kirghizii, **17**: 146.

Material: 1♂ 1♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1 & 2.IX.1983;

leg. Y.M. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Ala-Archa Valley [9], 2000 m, *Juniperus* sparse forest, litter, 27.IV.1983; leg. S.O. — 2♂ 3♀ (ZMMU), Kirghizsky Mt. Ridge, Malinovoye Valley [9] 1700 m, 27.VII.1983; leg. S.O. — 2♀ (ZMMU), Kirghizsky Mt. Ridge, near Tyuya-Ashu Pass [10], 3000 m, subalpine meadow, 12.VI.1983; leg. S.O. — 2♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2500-2700 m, *Picea* forest, litter, 18.VII.1984; leg. S.O. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, 20 km S of Pokrovka [23], 2000 m, *Picea* forest, litter, 29.VII.1984; leg. N.T. — 1♂ 1♀ (ZMMU), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, Kara-Kuldja Valley [18], 1500-1700 m, 20.VIII.1985; leg. S.Z. — 14♂ 18♀ (ZMMU), 20♂ 20♀ (SMF 34829), Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Juglans regia* forest, litter, under stones, VIII.-X.1984; leg. S.Z. — 36♂ 47♀ (ZMMU), same locality, 1400 m, 24.-28.IX.1983; leg. K.E. — 1♂ 8♀ (ZMMU), Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1300-1400 m, *Juglans regia* forest, litter, 22.-25.IV.1983; leg. A.T. & S.Z. — 2♂ 2♀ (ZMMU), 2♂ 2♀ (SMF 34831), Pamir-Alai Mts., Osh Area, Alaisky Mt. Ridge, Balykty Valley [29], 3000-3200 m, 13.VIII.1985; leg. S.Z. — 1♀ (ZMMU), Tadjikistan, Pamir-Alai Mts., Leninabad Area, Turkestansky Mt. Ridge, Kuravli Valley [58], 2500 m, near stream, 29.VI.1970; leg. D.N.

Remarks: This species has hitherto been known only from the W-Tien-Shang Mts. (Ugamsky and Fergansky Mt. Ridges: TANASEVITCH 1983, ZONSTEIN 1984).

Lepthyphantes vittatus SPASSKY 1941.

1941 *Lepthyphantes vittatus* SPASSKY, Folia Zool. Hydrobiol., **17** (1): 21; figs. (♀).
1945 *Lepthyphantes vittatus,* — SPASSKY & LUPPOVA, Ent. Obozr., **28** (1/2): 48 (♀).
1952 *Lepthyphantes vittatus,* — SPASSKY, Ent. Obozr., **32**: 194.
1975 *Lepthyphantes vittatus,* — ANDREEVA, Fragm. faun., **20** (19): 334.
1976 *Lepthyphantes vittatus,* — ANDREEVA, Pauki Tadjikistana, : 60.
1986 *Lepthyphantes vittatus,* — TANASEVITCH, Senckenbergiana biol., **67** (1/3): 164; figs. (♂♀).

Material: 2♀ (ZMMU), USSR, Uzbekistan, W-Tien-Shang Mts., Namangan Area, Kuraminsky Mt. Ridge, Kamchik Pass [39], 2300 m, 10.IV.1985; leg. S.O.

Remarks: This species has hitherto been known from Pamir-Alai Mts. (Tadjikistan: Dushanbe) (SPASSKY 1941, 1952, SPASSKY & LUPPOVA 1945, ANDREEVA 1975, 1976) and W-Tien-Shang (Fergansky Mt. Ridge) (TANASEVITCH 1986). In addition to my redescription of 1986, the chaetotaxy of metatarsi I-IV is 1-0-0-0.

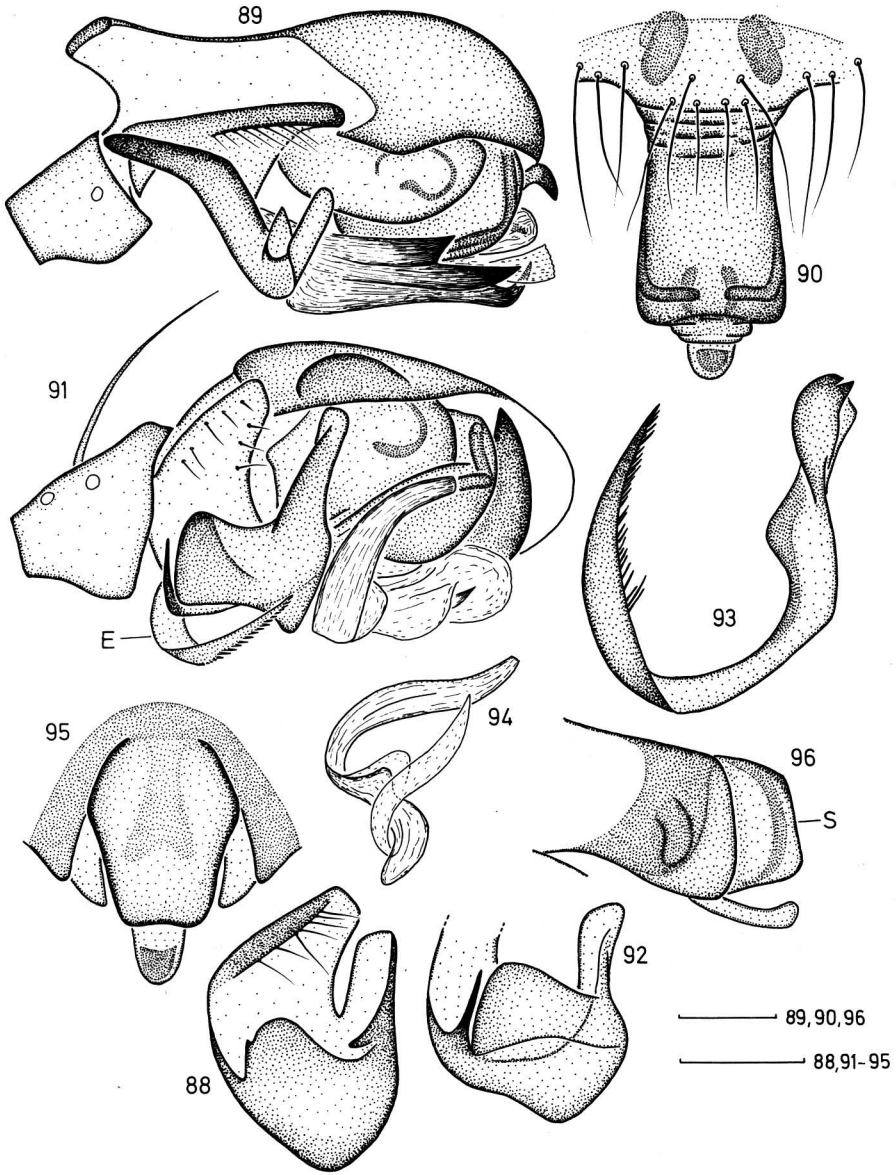
Lepthyphantes zonsteini n. sp.

Figs. 91-96.

1983 *Lepthyphantes uzbekistanicus* TANASEVITCH, Zool. Zh., **62** (12): 1788; figs. (♀ only!) [nec ♂].

Holotype: ♂ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Juglans regia* forest, litter, 15.VIII.1984; leg. S.Z.

Paratypes: 3♂ 8♀ (ZMMU), 2♂ 3♀ (SMF 34832), same locality and data as holotype, 15.-16.VIII.1984; leg. S.Z. — 6♀ (ZMMU), 3♂ (SMF 34833), Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1300 m, *Juglans regia* forest, litter, 22.IV.1982; leg. A.T. — 1♀ (ZMMU), Chatkalsky Mt. Ridge,



Figs. 88-96. *Lepthyphantes* sp. — 88) *uzbekistanicus,* ♂ from Aravan, Kirghizia; 89-90) *vaginatus,* ♂ ♀ from Fergansky Mt. Ridge; 91-96) *zonsteini* n. sp., ♂ ♀ paratypes. — 88, 92) ♂, paracymbium; 89, 91) ♂, right palp; 90, 95) ♀, epigyne, ventral view; 93) ♂, embolus; 94) ♂, lamella characteristica; 96) ♀, epigyne, lateral view.

Chatkal State Reserve [36], Bash-Kyzyl-Sai Valley, 1300 m, *Carex-Typha* swamp near spring, 19.IX.1983; leg. K.E.

Derivatio nominis: The new species is gladly named after its collector, Mr. SERGEI L. ZONSTEIN (Frunze).

Diagnosis: The species is closely related to *uzbekistanicus* TANASEVITCH 1983, but differs by the shorter lamella characteristica, longer tooth of the paracymbium (Figs. 88, 92), shape of the embolic division, and of the epigyne. By the structure of the embolus it is practically identical to *plumatus* TANASEVITCH 1986, but both species differ well by the structure of the palp and epigyne.

Description, ♂: Total length 1·70. Carapace: 0·78 long, 0·60 wide, pale brown, with a narrow dark margin. PME separated by their R. Chelicerae: 0·38 long, anterior margin with three teeth. Legs pale brown. Chaetotaxy. FeI: 0-1-0-0; TiI: 2-1-1-0, II: 2-0-1-0, III-IV: 2-0-0-0; MtI-III: 1-0-0-0. Leg I — 3·64 long (0·93 + 0·25 + 0·93 + 0·88 + 0·65), IV — 3·48 long (0·90 + 0·25 + 0·85 + 0·88 + 0·60). TmI 0·20. Palp (Figs. 91-94): Paracymbium with a very thin and long tooth. Lamella characteristica with a membranous process at base. Embolus very long, its proximal part fimbriate at margin. Abdomen: 0·93 long, 0·60 wide, grey.

♀: See description of ♀ *uzbekistanicus* TANASEVITCH 1983: 1789, fig. 2: 7-8. Epigyne as in Figs. 95-96.

Linyphia hortensis SUNDEVALL 1829.

1875 *Linyphia hortensis*, — KRONEBERG, Izv. Obshch. lyubit. estestv., antrop. i etnogr., **19** (3): 8.
1888 *Linyphia hortensis*, — KRONEBERG, Izv. Obshch. lyubit. estestv., antrop. i etnogr., **54**: 190.
1932 *Linyphia hortensis*, — CHARITONOV, Beilage Ann. Mus. Zool., **32**: 77.
1952 *Linyphia hortensis*, — SPASSKY, Ent. Obozr., **32**: 197.
1969 *Linyphia hortensis*, — CHARITONOV, Uch. zap. Perm. gos. univ., Biol., **179**: 77.
1975 *Linyphia hortensis*, — ANDREEVA, Fragm. faun., **20** (19): 335.
1976 *Linyphia hortensis*, — ANDREEVA, Pauki Tadjikistana, : 60.
1979 *Linyphia hortensis*, — TARABAEV, Trudy Kazakh. otd. Vses. Ent. Obshch., : 120.

Material: 1♂ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], 1500 m, 11.VII.1983; leg. K.M. — 1♀ (ZMMU), 2♀ (SMF 34834), N-Tien-Shang Mts., Kirghizsky Mt. Ridge, Frunze Area, Malinovoye Valley [9], 1700-2000 m, 27.VII.1983; leg. S.O. — 1♂ 2♀ (ZMMU), Kirghizsky Mt. Ridge, near Frunze [8], Orto-Sai Valley, 1100 m, 7.IV.1984; leg. S.O.

Remarks: Within Middle Asia, this species has been recorded from the Pamir-Alai Mts. (Iskander-Kul Lake: KRONEBERG 1875, 1888, CHARITONOV 1932, ANDREEVA 1975, 1976), N-Tien-Shang (Zailiysky-Alatau Mt. Ridge: TARABAEV 1979), Uzbekistan (Kashkadarya Area: CHARITONOV 1969), and the "Turan zoogeographical province" (SPASSKY 1952).

Microlinyphia pusilla (SUNDEVALL 1829).

1875 *Linyphia pusilla*, — KRONEBERG, Izv. Obshch. lyubit. estestv., antrop. i etnogr., **19** (3): 8.
1889 *Linyphia pusilla*, — SIMON, Verh. zool.-bot. Ges. Wien, **39**: 383.
1899 *Linyphia pusilla*, — SIMON in G. RADDE, Samml. Kaukas. Mus., **1**: 479.

1932 *Linyphia pusilla,* — CHARITONOV, Beilage Ann. Mus. Zool., **32**: 79.
1937 *Linyphia pusilla,* — VLASOV & SYTSHEVSKAJA, Trudy Sredneaz. opytn. protivochum. stantsii AN SSSR, **9**: 250.
1937 *Linyphia pusilla,* — SPASSKY & SHNITNIKOV, Trudy Kazakh. fil. AN SSSR, **2**: 274.
1945 *Linyphia pusilla,* — SPASSKY & LUPPOVA, Ent. Obozr., **28** (1-2): 48.
1952 *Linyphia pusilla,* — SPASSKY, Ent. Obozr., **32**: 197.
1955 *Linyphia pusilla,* — YAKHONTOV, Zool. Zh., **34** (2): 361.
1975 *Linyphia pusilla,* — ANDREEVA, Fragm. faun., **20** (19): 335.
1976 *Linyphia pusilla,* — ANDREEVA, Pauki Tadjikistana, : 61.
1980 *Microlinyphia pusilla,* — OVTSHARENKO & FET, Ent. Obozr., **59** (2): 444.
1984 *Microlinyphia pusilla,* — ZONSTEIN, Ent. issled. v Kirghizii, **17**: 146.
1985 *Microlinyphia pusilla,* — PAVLENKO, Trudy Zool. Inst. AN SSSR, **139**: 153.
1986 *Microlinyphia pusilla,* — TANASEVITCH & FET, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 1♂ 2♀ (ZMMU), USSR, Turkmenia, E-Karakum Desert, Chardjou Area, near Farab [50], 18.V.1929; leg. V.S. — 1♂ (ZMMU), Badhkyz [52], Kyzyl-Djar, 17.-28.II.1978; leg. V.K. — 1♀ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Djambul Area, near Georgievka [3], 600-800 m, 22.V.1984; leg. S.O. — 3♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze, 750 m, swampy meadow, 23.V.1979; leg. S.Z. — 1♂ 1♀ (SMF 34835), Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, *Picea* forest, 23.VI.1983; leg. S.O. — 8♀ (ZMMU), 7♀ (SMF 34836), Uzbekistan, Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Kampyrtepa-Sai Valley [46], 1600 m, in grass near spring, 21.V.1984; leg. A.T. — 8♀ (ZMMU), 7♀ (SMF 34837), W-Tien-Shang Mts., Namangan Area, Kuraminsky Mt. Ridge, Uigur-Sai Valley [40], 1500 m, 9.IV.1985; leg. S.O.

Remarks: This species is widespread in Middle Asia and has hitherto been registered in Turkmenia (SIMON 1889, 1899, VLASOV & SYTSHEVSKAJA 1937, OVTSHARENKO & FET 1980, TANASEVITCH & FET 1986), Uzbekistan (KRONEBERG 1875, CHARITONOV 1932, YAKHONTOV 1955), Tadjikistan (SPASSKY & LUPPOVA 1945, ANDREEVA 1975, 1976), Kirghizia (KRONEBERG 1875, CHARITONOV 1932, ZONSTEIN 1984), Kazakhstan (SPASSKY & SHNITNIKOV 1937), as well as in the "Turan zoogeographical province" (SPASSKY 1952).

Microneta viaria (BLACKWALL 1841).

Material: 3♂ 5♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary Chelek State Reserve [33], near Arkit, 1300-1500 m, *Juglans regia* forest, litter, 29.IV.-5.VI.1983; leg. A.T. & S.Z. — 8♂ 11♀ (ZMMU), 5♂ 5♀ (SMF 34838), Sary Chelek State Reserve [33], Kulte-Sai Valley, 1800 m, *Juglans regia-Abies* forest, litter, 17.IX.1983; leg. A.R. — 1♀ (ZMMU), N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Malinovoye Valley [9], 1700-2000 m, 27.VII.1983; leg. S.O.

Remarks: This species is new for the Middle Asian fauna.

Neriene clathrata (SUNDEVALL 1829).

1937 *Linyphia clathrata,* — SPASSKY & SHNITNIKOV, Trudy Kazakh. fil. AN SSSR, **2**: 274.
1979 *Linyphia clathrata,* — TARABAEV, Trudy Kazakh. otd. Vses. Entom. Obshch., : 120.
1984 *Neriene clathrata,* — ZONSTEIN, Ent. issled. v Kirghizii, **17**: 146.

Material: 1♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang, Alma Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Pravy Talgar Valley, 1800-2000 m, 17.IX.1984; leg. S.O. — 1♂ 3♀ (ZMMU), 2♂ 1♀ (SMF 34839), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, *Populus* stand, 23.IV.1982; leg. S.Z. — 1♂ (ZMMU), Issyk-Kul Area, Kungey-Alatau Mt. Ridge, near Dolinka [24], 1800 m, 26.VI.1980; leg. S.Z. — 1♀ (ZMMU), Uzbekistan, near Tashkent [41], bank of Chirchik river, under stones, 7.IV.1982; leg. A.T. — 1♀ (ZMMU), W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1300 m, *Juglans regia* forest, litter, 22.IV.1982; leg. A.T.

Remarks: Within Middle Asia, this species has hitherto been known from the N- and W-Tien-Shang Mts. (Zailiysky-Alatau and Fergansky Mt. Ridges: Spassky & Shnitnikov 1937, Tarabaev 1979, Zonstein 1984).

Poeciloneta variegata (Blackwall 1841).

1984 *Poeciloneta variegata*, — Zonstein, Ent. issled. v Kirghizii, **17**: 146.

Material: 1♀ (ZMMU), USSR, Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1400 m, 27.VI.1983; leg. A.Z. — 2♀ (ZMMU), Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1300-1500 m, *Juglans regia* forest, litter, 29. & 30.IV.1983; leg. A.T. — 1♀ (ZMMU), N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m 20.V.1979; leg. S.Z.

Remarks: In Middle Asia, this species has heretofore been registered only from W-Tien-Shang (Fergansky Mt. Ridge: Zonstein 1984).

Porrhomma pygmaeum (Blackwall 1834).

Material: 1♂ 2♀ (ZMMU), USSR, Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Chatkalsky Mt. Ridge, mouth of Chatkal River [38], 1300 m, litter along stream, 19.-21.IV.1982; leg. A.T. — 2♀ (ZMMU), Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Bagly-Dara Valley [45], 1600 m, litter along spring, 25.V.1985; leg. A.T.

Remarks: This species is new for the Middle Asian fauna.

Stemonyphantes curvipes n. sp.

Figs. 97-98.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, *Picea* forest, 23.VI.1983; leg. S.O.

Diagnosis: The new species joins the *lineatus*-group and is well distinguishable from the other forms by the pointed outgrowth of the tegulum and both slender and bifid radix of ♂.

Description, ♂ (♀ unknown): Total length 4·05. Carapace: 1·95 long, 1·50 wide, pale brown. PME separated by their D. Chelicerae: 0·75 long, anterior margin with four teeth. Legs pale brown, dark rings missing. Tibia I regularly curved. Chaetotaxy. FeI: 3-2-0-0, II: 3(2)-0-0-0, III-IV: 2(1)-0-0-0; TiI-IV with numerous

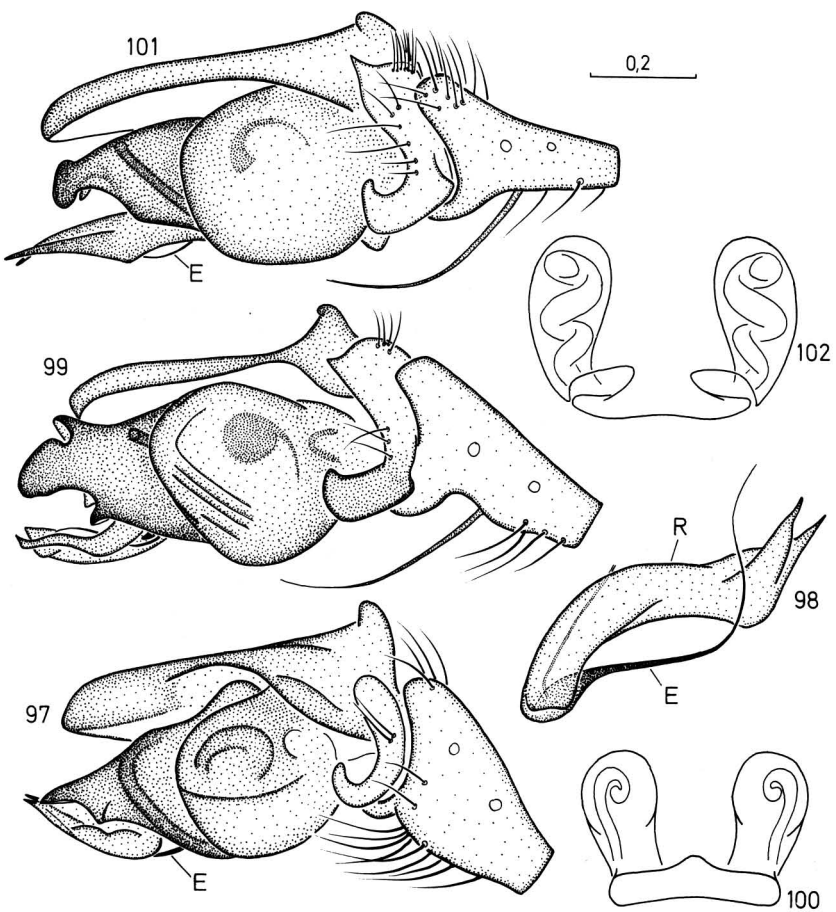
spines. TmI 0·50. Leg I — 7·40 long (2·00 + 0·70 + 1·80 + 1·80 + 1·10), IV — 7·80 long (2·00 + 0·60 + 2·00 + 2·15 + 1·05). Palp as in Figs. 97-98. Abdomen: 2·15 long, 1·35 wide, grey.

Stemonyphantes griseus (Schenkel 1937) n. comb.

Figs. 99-100.

1937 *Labulla grisea* Schenkel, Ark. Zool., **29A** (1): 71; fig. (♀).
1985 *Stemonyphantes volucer* Tanasevitch, Ent. Obozr., **64** (4): 846; figs. (♂♀) [n. syn.!]

Material: 1♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang, Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Cholpon-Ata Valley [24], 2200-2500 m, *Picea* forest, 6.V.1983; leg. S.O. —



Figs. 97-102. *Stemonyphantes* sp. — 97-98) *curvipes* n. sp., ♂ holotype; 99-100) *griseus*, ♂♀ from Fergansky Mt. Ridge; 101-102) *grossus*, ♂♀ from Fergansky Mt. Ridge. — 97, 99, 101) ♂, left palp; 98) ♂, embolic division; 100, 102) ♀, vulva, ventral view.

1 ♀ (SMF 34842), Terskey-Alatau Mt. Ridge, Santash Valley [13], 2400 m, 22.VII.1983; leg. S.O. — 1 ♀ (ZMMU), C-Tien-Shang Mts., Terskey-Alatau Mt. Ridge, Koilyu Valley [16], 2800 m, *Picea* forest, 16.VII.1983; leg. S.O.

Remarks: This species was originally described as *Labulla grisea* from a single ♀ from Kansu Prov., China (SCHENKEL 1937). That description was supplied with a drawing of the epigyne which, upon a restudy of the type specimen kept at the SMNH, has turned out to have nothing to do with reality. This very poor sketch misled me when I described *volucer* TANASEVITCH 1985 from N-Tien-Shang (Issyk-Kul Lake), which actually has proven to be but a junior synonym of *griseus* (n. syn., n. comb.). This species joins the *lineatus*-group.

Stemonyphantes grossus TANASEVITCH 1985.

Figs. 101-102.

1985 *Stemonyphantes grossus* TANASEVITCH, Ent. Obozr., **64** (4): 845; figs. (♂ ♀).

Material: 1 ♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1500 m, *Juglans regia* forest, 2.V.1983; leg. S.Z. — 1 ♂ 2 ♀ (ZMMU), Fergansky Mt. Ridge, upper reaches of Arslanbob River [17], 2200 m, subalpine meadow, 17.VI.1984; leg. S.Z. — 1 ♂ 2 ♀ (SMF 34843), Fergansky Mt. Ridge, near Yarodar [17], 1400-1600 m, *Juglans regia* forest, VIII.-X.1984; leg. S.Z.

Remarks: This form has recently been described from W-Tien-Shang (Chatkalsky and Fergansky Mt. Ridges: TANASEVITCH 1985). It joins the *lineatus*-group, but differs in the shape of the frontal tegular outgrowth, long apophyses of the ♂ palpal radix, etc.

Stemonyphantes lineatus (LINNAEUS 1758).

1979 *Stemonyphantes lineatus*, — TARABAEV, Trudy Kazakh. otd. Vses. Ent. Obshch., : 120.
1984 *Stemonyphantes lineatus*, — ZONSTEIN, Ent. issled. v Kirghizii, **17**: 147.

Material: 2 ♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Pravy Talgar Valley, 1600-1800 m, 17.IV.1984; leg. S.O. — 1 ♂ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], VIII.1978; leg. S.Z. — 1 ♀ (ZMMU), Pamir-Alai Mts., Osh Area, Alaisky Mt. Ridge, Balykty Valley [29], 1100-1400 m, 24.VIII.1981; leg. S.Z.

Remarks: Within Middle Asia, this species has already been registered in N-Tien-Shang (Zailiysky-Alatau Mt. Ridge: TARABAEV 1979) and W-Tien-Shang (Fergansky Mt. Ridge: ZONSTEIN 1984).

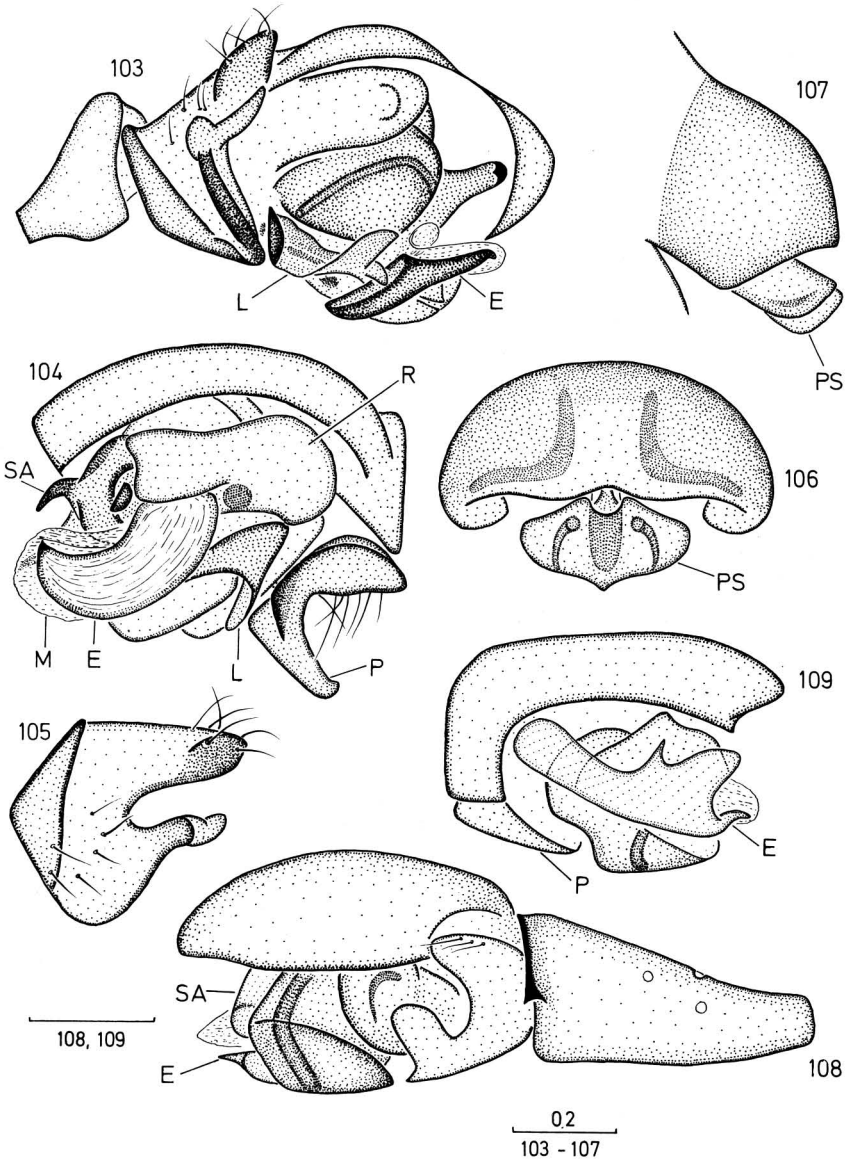
Troglohyphantes molestus n. sp.

Figs. 103-107.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2700 m, 18.VII.1984; leg. S.O.

Paratypes: 1 ♂ (ZMMU), same locality and data as holotype. — 1 ♂ 1 ♀ (SMF 34844), Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2200-2500 m, 4.VII.1985; leg. S.O. —

3 ♀ (ZMMU), C-Tien-Shang Mts., Terskey-Alatau Mt. Ridge, Sary-Djaz River flow, Bolshoi Berkut Valley [15], 3200 m, 19.VII.1983; leg. S.O. — 1 ♂ 1 ♀ (ZMMU), Terskey-Alatau Mt. Ridge, Koilyu Valley [16], 2800 m, *Picea* forest, on rocks, 16.VII.1983; leg. S.O.



Figs. 103-109. *Troglohyphantes molestus* n. sp., ♂ ♀ paratypes (103-107); *Arachosinella strepens*, ♂ from Terskey-Alatau Mt. Ridge (108-109). — 103-104) ♂, right palp; 105) ♂, paracymbium; 106-107) ♀, epigyne, ventral & lateral views, respect.; 108-109) ♂, left palp.

Diagnosis: The new species is characterized by the absence of a transverse groove on the cymbium, shape of the embolus, lamella characteristica, as well as structure of the epigyne, the latter feature being unique within the genus and rather reminding of that of certain *Lepthyphantes* MENGE 1866, particularly *kronebergi* n. sp. and *turkestanicus* n. sp. of the *nebulosus*-group.

Description, ♂: Total length 3·53. Carapace: 1·65 long, 1·25 wide, pale brown, with a dark median stripe and broad darker margin. PME separated by their D. Chelicerae: 0·65 long, anterior margin with three teeth. Legs pale brown, with dark rings. Chaetotaxy. FeI: 0-2-0-0; TiI: 2-3-3-4, II: 2-3-3-4(3), III: 2-2-2(1)-2(3), IV: 2-2-2-1; MtI-IV: 1-1-1-1 (sometimes metatarsi have additional spines). MtI-III each with a trichobothrium. TmI 0·14. Leg I — 13·30 long (3·45 + 0·55 + 3·55 + 3·70 + 2·05), IV — 8·75 long (2·55 + 0·45 + 2·30 + 2·25 + 1·20). Palp as in Figs. 103-105. Abdomen: 1·90 long, 1·25 wide, dorsally pale, with an axial dark stripe and paramedian dark spots connected to the stripe with thin bands, ventrally grey, with a white, interrupted, axial stripe.

♀: Total length 4·01. Carapace: 1·80 long, 1·40 wide. PME separated by their D. Chelicerae: 0·75 long, anterior margin with three teeth. Leg I — 12·20 long (3·35 + 0·60 + 3·35 + 3·20 + 1·70), IV — 8·20 long (2·30 + 0·50 + 2·05 + 2·25 + 1·10). Abdomen: 2·25 long, 1·40 wide. Epigyne as in Figs. 106-107. Body and leg coloration, chaetotaxy as in ♂.

Subfamily Erigoninae.

Acartauchenius scurillis (O. PICKARD-CAMBRIDGE 1872).

1984 *Acartauchenius scurillis*, — ZONSTEIN, Ent. issled. v Kirghizii, **17**: 146.

Material: 1♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Djambul Area, Kindiktas Mts., Kurdai Pass [2], 1200 m, 14.IV.1983; leg. S.Z. & S.O. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, under stones in a nest of the ant *Messor* sp., 4.VII.1980; leg. S.Z. — 1♀ (ZMMU), Frunze Area, Buamskoye Valley [26] (between Kirghizsky & Kungey-Alatau Mt. Ridges), 1000-1300 m, 1.V.1984; leg. S.O. — 1♂ (ZMMU), 1♂ (SMF 36653), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], under stones in ant nests, 9.V.1983; leg. A.T. — 1♀ (ZMMU), near Djelalabad [20], 800 m, in a nest of the ant *Messor* sp., 30.V.1980; leg. S.Z.

Remarks: This possibly myrmecophilous species has heretofore been recorded, in Middle Asia, from W-Tien-Shang (Fergansky Mt. Ridge: ZONSTEIN 1984).

Alioranus avanturus ANDREEVA & TYSTSHENKO 1970.

Figs. 110-114.

1970 *Alioranus avanturus* ANDREEVA & TYSTSHENKO, Zool. Zh., **49** (1): 38; figs. (♂♀).
1975 *Alioranus avanturus*, — ANDREEVA, Fragm. faun., **20** (19): 335.
1976 *Alioranus avanturus*, — ANDREEVA, Pauki Tadjikistana, : 61; figs. (♂♀).

Material: 4♂ 18♀ (ZMMU), 3♂ 6♀ (SMF 34846), USSR, Uzbekistan, Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Bagly-Dara Valley [45], 1600-1800 m,

Juniperus sparse forest, litter along spring, 25.-27.V.1985; leg. A.T. — 9♀ (ZMMU), Turkmenia, Pamir-Alai Mts., Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1400 m, valley, under stones along spring, 20.V.1985; leg. A.T. — 1♀ (ZMMU), Kirghizia, C-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Koilyu Valley [16], 2800 m, *Picea* forest, 16.VII.1983; leg. S.O. — 1♂ 1♀ (ZMMU), N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 11.VIII.1984; leg. S.O. — 1♀ (ZMMU), Tadjikistan, W-Pamir Mts., Gorny-Badakhshan Autonomous Region, Shugnansky Mt. Ridge, near Khorog [64], 2000-3000 m, 17.V.1970; leg. E.A.

Remarks: This species, known to be very closely related to the Mediterranean *pauper* (SIMON 1881), was originally described (ANDREEVA & TYSTSHENKO 1970) from Pamir-Alai (Hissarsky Mt. Ridge) and "Tigrovaya Balka" State Reserve, Tadjikistan.

Alioranus planiceps (WUNDERLICH 1980) n. comb.

Figs. 115-116.

1980 *Hubertinus planiceps* WUNDERLICH, Senckenbergiana biol., **61** (1/2): 122; figs. (♂ ♀).

Material: 1♂ 1♀ (ZMMU), USSR, Tadjikistan, Dushanbe Area, near Kurgan-Tyube [60], 800 m, 1968; leg. E.A.

Remarks: *Hubertinus* WUNDERLICH 1980 (type species *H. planiceps* WUNDERLICH 1980), originally described from Crete and Cyprus, is a junior synonym of *Alioranus* SIMON 1926 (type species *Erigone paupera* SIMON 1881) (n. syn.!). *A. planiceps* is new for the USSR fauna.

Arachosinella strepens DENIS 1958.

Figs. 108-109.

1958 *Arachosinella strepens* DENIS, Vidensk. Med., **120**: 114; figs. (♂ ♀).

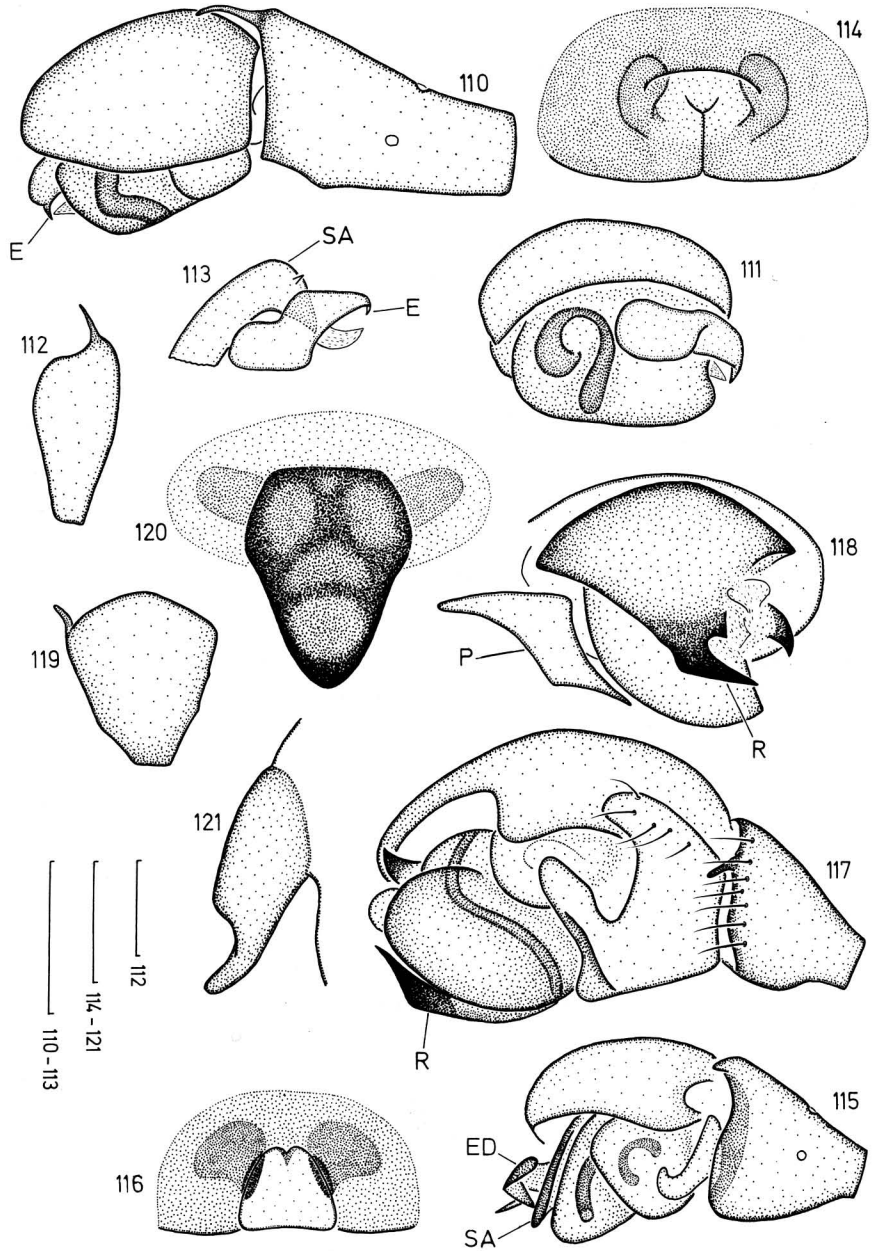
Material: 1♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2700 m, *Picea* forest, litter, 18.VII.1984; leg. S.O.

Short redescription: Leg chaetotaxy — 2.2.2.2. Metatarsi I-III each with a trichobothrium. TmI 0·41. Coxa IV with an apical tooth. Grooves on the abdominal stridulatory fields are very well-developed. Chelicerae strong, frontal surface with a large tooth and, closer to outer margin, with several denticles.

Remarks: This species has hitherto been known but from the locus typicus in Afghanistan (Puistagoli, Koh-i-Baba: DENIS 1958). New for the USSR fauna.

Archaraeoncus prospiciens (THORELL 1875).

1875 *Erigone prospiciens* THORELL, Horae Soc. Ent. Ross., **11**: 62.
1884 *Araeoncus prospiciens,* — SIMON, Les Arachnides de France, **5** (3): 643.
1987 *Archaraeoncus prospiciens,* — TANASEVITCH, Senckenbergiana biol., **67** (4/6): 338.



Figs. 110-121. *Alioranus avanturus,* ♂♀ from Kuhitang-Tau Mt. Ridge (110-114); *planiceps,* ♀♀ from Kurgan-Tyube, Tadjikistan (115-116); *Asthenargus edentulus* n. sp., ♂♀ paratypes (117-121). — 110-111, 115, 117-118) ♂, left palp; 112, 119) ♂, palpal tibia, dorsal view; 113) ♂, suprategular apophysis & embolic division; 114, 116, 120) ♀, epigyne, ventral view; 121) ♀, epigyne, lateral view.

Material: 1♂ 3♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, 18.II.1983; leg. S.Z.

Remarks: In Middle Asia, this species has hitherto been recorded but from N-Tien-Shang as well (Frunze: TANASEVITCH 1987a).

Asthenargus edentulus n. sp.

Figs. 117-121.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Chon-Kyzylsu Valley [23], Karabatkak, 2600 m, *Picea* forest, moss, 2.IX.1983; leg. A.R.

Paratypes: 9♀ (ZMMU), 4 ♀ (SMF 34847), same locality and data as holotype. — 1♂ (SMF 34848), 2♀ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, litter, 1.-2.IX.1983; leg. Y.M. — 1♂ 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, Frunze Area, Ala-Archa Valley [9], 1600 m, 28.VI.1983; leg. S.O. — 2♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, 30 km S of Pokrovka [23], Ailama, 2800 m, *Picea* forest, moss, 27.VII.1984; leg. N.T.

Diagnosis: The new species seems particularly closely related to *thaleri* WUNDERLICH 1983, described from Nepal, but differs from it by the shorter, narrower and feebler sclerotized process of the male palpal tibia, lack of a spine at distal part of the paracymbium, presence of only one large, sclerotized, dentiform outgrowth at the radical part of the embolic division, as well as by the narrower and longer epigyne of ♀. From both *thaleri* and other congeners, *edentulus* n. sp. differs by the absence of a tooth on the frontal surface of ♂ chelicerae.

Description, ♂: Total length 1·90. Carapace: 0·83 long, 0·60 wide, brownish-red. PME separated by their 1·5 D. Chelicerae: 0·38 long, frontal surface without tooth, anterior margin with five teeth. Legs reddish-brown. Tibial spines 2.2.2.1. Metatarsi I-III each with a trichobothrium. TmI 0·40. Leg I — 2·02 long (0·58 + 0·23 + 0·50 + 0·38 + 0·33), IV — 2·14 long (0·58 + 0·23 + 0·55 + 0·45 + 0·33). Coxa IV with a small sharp tooth. Palp (Figs. 117-119): Tibia with a small and slender retrolateral process. Embolic division voluminous, with a large, sharp, dark dentiform outgrowth provided with a small tooth near base. Embolus membranous, scarcely visible. Abdomen: 1·00 long, 0·70 wide, grey.

♀: Total length 2·15. Carapace: 0·90 long, 0·65 wide. PME separated by their D. Chelicerae: 0·40 long, anterior margin with five (six) teeth. Leg I — 2·26 long (0·65 + 0·23 + 0·53 + 0·45 + 0·40), IV — 2·44 long (0·70 + 0·23 + 0·63 + 0·50 + 0·38). Abdomen: 1·25 long, 0·93 wide. Epigyne as in Figs. 120-121. Body and leg coloration, chaetotaxy as in ♂.

Caviphantes dobrogica (DUMITRESCU & MILLER 1962).

1962 *Lessertiella dobrogica* DUMITRESCU & MILLER, Čas. československ. Společ. ent., **59** (2): 165; figs. (♂ ♀).

1987 *Caviphantes dobrogica*, — TANASEVITCH, Senckenbergiana biol., **67** (4/6): 343.

Material: 1♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, 5.VII.1983; leg. S.O.

Remarks: In Middle Asia, this species is known but from a single locality: Frunze in N-Tien-Shang; besides Middle Asia, within the USSR *dobrogica* has been registered in the Caucasus (TANASEVITCH 1987a).

Ceratinella brevis (WIDER 1834).

1984 *Ceratinella brevis*, — ZONSTEIN, Ent. issled. v Kirghizii, **17**: 146.
1986 *Ceratinella brevis*, — TANASEVITCH & FET, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 3♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 800 m, 5.VI.1978; leg. S.Z. — 1♂ 2♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2000-2200 m, litter along spring, 15.VII.1985; leg. S.Z. — 1♂ (ZMMU), W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1250 m, *Juglans regia-Berberis* forest, litter, 28.IX.1983; leg. A.R. — 1♀ (SMF 34849), Fergansky Mt. Ridge, near Yarodar [17], 1400 m, dry limestone rocks, under stones, 30.IX.1983; leg. K.E.

Remarks: This species has hitherto been recorded from W-Tien-Shang (Fergansky Mt. Ridge: ZONSTEIN 1984) and W-Kopetdagh, Turkmenia (TANASEVITCH & FET 1986).

Ceratinella wideri (THORELL 1871).

Material: 2♂ 1♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], 1400 m, *Juglans regia* forest, litter, 29.IV.-4.V.1983; leg. A.T.

Remarks: This species is new for the USSR fauna.

Ceratinopsis romana (O. PICKARD-CAMBRIDGE 1872).

1970 *Thyreosthenius asiaticus* ANDREEVA & TYSTSHENKO, Zool. Zh., **49** (1): 40; figs. (♀).
1974 *Thyreosthenius asiaticus*, — ANDREEVA-PRÓSZYŃSKAYA, Mater. VII. Kongr. Vses. Ent. Obshch. (Abstr.), **1**: 6.
1975 *Thyreosthenius asiaticus*, — ANDREEVA, Fragm. faun., **20** (19): 335.
1976 *Thyreosthenius asiaticus*, — ANDREEVA, Pauki Tadjikistana, : 63; figs. (♀).
1983 *Ceratinopsis romana*, — TANASEVITCH, Zool. Zh., **62** (12): 1786.
1985 *Ceratinopsis romanus*, — PAVLENKO, Trudy Zool. Inst. AN SSSR, **139**: 153.
1986 *Ceratinopsis romana*, — TANASEVITCH & FET, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 2♂ (ZMMU), USSR, Turkmenia, Chardjou Area, E-Karakum Desert, Repetek State Reserve [51], in house, 21.XII.1981; leg. V.K.

Remarks: This species was originally recorded from Middle Asia as *Thyreosthenius asiaticus* ANDREEVA & TYSTSHENKO 1970, from the high altitudes of the Pamir-Alai Mts. (Hissarsky Mt. Ridge: ANDREEVA & TYSTSHENKO 1970, ANDREEVA-PRÓSZYŃSKAYA 1974, ANDREEVA 1975, 1976), later it was registered under its proper name (and synonymized) from W-Tien-Shang (Chatkalsky Mt. Ridge: TANASEVITCH 1983), Turkmenia (Repetek: TANASEVITCH & FET 1986), and Barsaselmes Island, Aral Sea (PAVLENKO 1985).

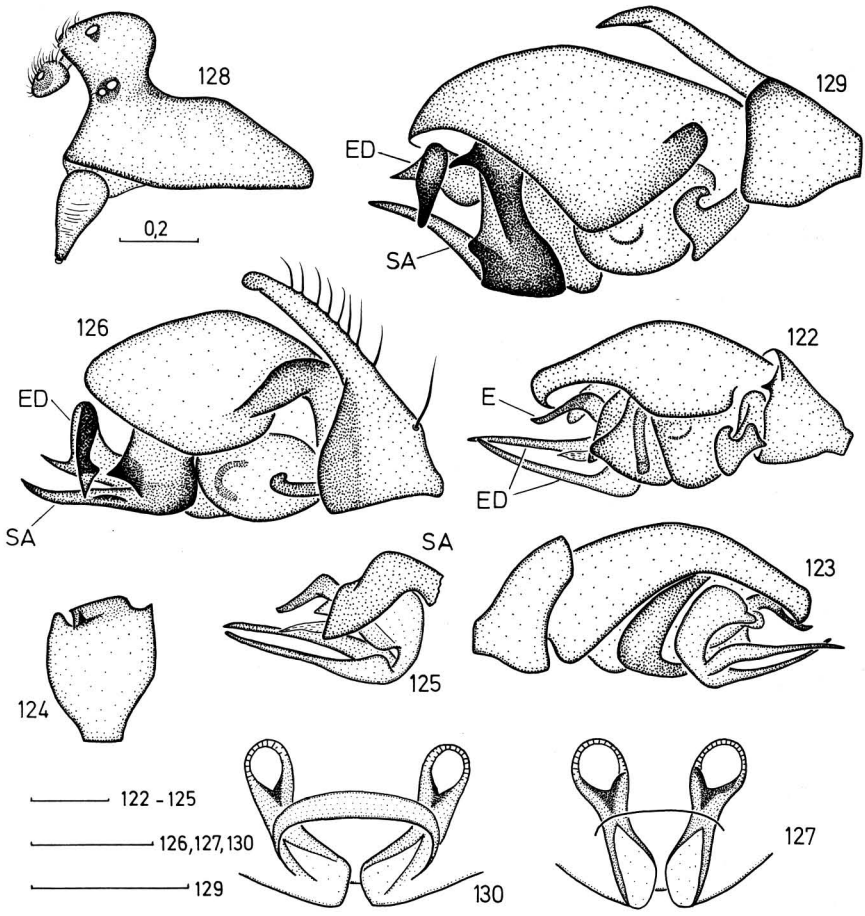
Collinsia tianschanica n. sp.

Figs. 122-125.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Santash Valley [13], 2800 m, 12.VIII.1982; leg. S.O.

Diagnosis: The new species is very distinct among congeners by the presence of two narrow and very long apophyses of the embolic division.

Description, ♂ (♀ unknown): Total length 1·83. Carapace: 0·88 long, 0·65 wide, pale brown. PME separated by their 1·5 D. Chelicerae: 0·40 long, anterior



Figs. 122-130. *Collinsia tianschanica* n. sp., ♂ holotype (122-125); *Dactylopisthes locketi,* ♂ ♀ from Ugamsky Mt. Ridge (126-127); *mirabilis,* ♂ ♀ from Issyk-Kul Lake (128-130). — 122-123, 126, 129) ♂, left palp; 124) ♂, palpal tibia, dorsal view; 125) ♂, suprategular apophysis & embolic division; 127, 130) ♀, vulva, ventral view; 128) ♂, carapace.

margin with four (five) teeth. Legs pale brown. Tibial spines 2.2.2.1. Metatarsi I-III each with a trichobothrium. TmI 0·45. Leg I — 2·36 long (0·63 + 0·23 + 0·60 + 0·50 + 0·40), IV — 2·54 long (0·70 + 0·25 + 0·68 + 0·53 + 0·38). Palp (Figs. 122-125): Suprategular apophysis short and broad. Radical part of embolic division elongated into two thin and very long apophyses. Abdomen: 1·00 long, 0·68 wide, pale grey.

Dactylopisthes locketi (Tanasevitch 1983) n. comb.

Figs. 126-127.

1983 *Tapinocyba locketi* Tanasevitch, Zool. Zh., **62** (12): 1791; figs. (♂ ♀).

Material: 1♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Juglans regia* forest, litter, X.1984; leg. S.Z. — 1♂ 1♀ (ZMMU), 1♂ 1♀ (SMF 34850), Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1300 m, *Juglans regia* forest, litter, 22.-25.IV.1983; leg. S.Z.

Remarks: This species was originally described from W-Tien-Shang (Ugamsky Mt. Ridge: Tanasevitch 1983) and provisionally assigned to *Tapinocyba* Simon 1884. Besides, the leg chaetotaxy was then erroneously indicated as being 1.1.1.1, actually it is 2.2.1.1. This point removes the last doubts as regards its generic allocation: *locketi* belongs to *Dactylopisthes* Simon 1884 (n. comb.).

Dactylopisthes mirabilis (Tanasevitch 1985) n. comb.

Figs. 128-130.

1985 *Scytiella mirabilis* Tanasevitch, Ent. Obozr., **64** (4): 853; figs. (♂).

Material: 1♂ 1♀ (SMF 34851), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, bank of Issyk-Kul Lake, near Dolinka [24], 1700 m, 31.VIII.1979; leg. S.Z.

Description, ♀: Total length 1·63. Carapace normal, 0·65 long, 0·50 wide, reddish-brown. PME separated by their D. Chelicerae: 0·25 long, anterior margin with four teeth. Legs reddish-brown. Tibial spines 2.2.1.1. Metatarsi I-III each with a trichobothrium. TmI 0·48. Leg I — 1·66 long (0·43 + 0·15 + 0·50 + 0·30 + 0·28), IV — 1·76 long (0·53 + 0·15 + 0·48 + 0·35 + 0·25). Abdomen: 1·08 long, 0·75 wide, dark grey. Vulva as in Fig. 130.

Remarks: This species has been described by ♂♂ from N-Tien-Shang (Issyk-Kul Lake: Tanasevitch 1985) and provisionally assigned to *Scytiella* Georgescu 1976. However, certain somatic characters (modified carapace in ♂, leg chaetotaxy, Tm) and palpal structure (shape of tibia, extremely well-developed suprategular apophysis elongated into a sharp stylet) permit to regard this taxon as an indisputable congener of *Dactylopisthes digiticeps* (Simon 1884), its type species, thus warranting the new combination of *mirabilis* sub *Dactylopisthes* Simon 1884 (n. comb.). Therefore, this formerly monotypical W-Mediterranean genus has become enriched with two Asian forms, *locketi* Tanasevitch 1983 and *mirabilis* Tanasevitch 1985, a fact long suspected by Millidge (1977: 34), this marking its distribution pattern as Ancient Mediterranean.

The ♀♀ of the closely related *mirabilis* and *locketi* differ only in certain minor details of the structure of the vulvae (Figs. 127-130). This is the first description of the ♀ of *mirabilis!*

Dicymbium nigrum (Blackwall 1834).

1984 *Dicymbium nigrum*, — Zonstein, Ent. issled. v Kirghizii, **17**: 146.

Material: 2♂ 7♀ (ZMMU), 1♂ 3♀ (SMF 34852), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1. & 2.IX.1983; leg. Y.M. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 1800 m, *Picea* & *Crataegus* forest, litter, 9.IX.1983; leg. A.R. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Santash Valley [13], 2800 m, 18.VII.1984; leg. S.O. — 2♂ 10♀ (ZMMU), W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1300-1500 m, *Juglans regia* forest, litter, 29.IV.-4.V.1983; leg. A.T. & S.Z. — 6♂ 14♀ (ZMMU), 5♂ 5♀ (SMF 34854), Fergansky Mt. Ridge, near Yarodar [17], 1400-1600 m, *Juglans regia* forest, litter, 24.-27.IX.1983; leg. K.E.

Remarks: In Middle Asia, this species has been known only from Fergansky Mt. Ridge (Kirghizia, W-Tien-Shang: Zonstein 1984).

Diplocephalus bifurcatus n. sp.

Figs. 131-136.

Holotype: ♂ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mts., Syunt-Khasardagh State Reserve [54], 2.VII.1982; leg. N.U.

Diagnosis: The new species is characterized by the conspicuous shape of the palpal tibia in ♂, and structure of the embolic division. By the shape of the carapace it resembles many congeners.

Description, ♂ (♀ unknown): Carapace: 0·75 long, 0·55 wide, dark brown. Cephalic part of carapace elevated, as in Fig. 131. Palp (Figs. 132-136): Tibia elongated dorsally, curved and apically bifid. Suprategular apophysis as a long narrow ribbon carrying a sharp small tooth at midlength. Radical part of embolic division large, elongate. Legs and abdomen torn off.

Diplocephalus montanus n. sp.

Figs. 137-141.

1970 *Diplocephalus cristatus*, — Andreeva & Tystshenko, Zool. Zh., **49** (1): 40.
1974 *Diplocephalus cristatus*, — Andreeva-Prószyńskaya, Mater. VII. Kongr. Vses. Ent. Obshch. (Abstr.), **1**: 6.
1975 *Diplocephalus cristatus*, — Andreeva, Fragm. faun., **20** (19): 335.
1976 *Diplocephalus cristatus*, — Andreeva, Pauki Tadjikistana, : 63.

Holotype: ♂ (ZMMU), USSR, Tadjikistan, W-Pamir Mts., Gorny-Badakhshan Autonomous Region, Shugnansky Mt. Ridge, near Khorog [64], Sangoudara, 3800-4000 m, 12.VII.1970; leg. E.A.

Paratypes: 5♀ (ZMMU), same locality and data as holotype. — 1♂ (ZMMU), same locality, 3600-3800 m, 12.VII.1970; leg. E.A. — 1♀ (ZMMU), Pamir-Alai Mts., Hissarsky Mt. Ridge, Anzob Pass [57], 3450 m, alpine meadow, 15.VIII.1967; leg. E.A. — 10♀ (ZMMU),

4 ♀ (SMF 34855), Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], Kara-Toko, 3200 m, alpine meadow, under stones, 20.VII.1983; leg. A.R.

Diagnosis: This species seems closely related to *cristatus* (Blackwall 1833) and is well distinguishable from it by the shape of the carapace, form of the palpal tibia and embolic division in ♂, as well as by the structure of the vulva in ♀.

Description, ♂: Total length 1·90. Carapace (Fig. 137): 0·83 long, 0·63 wide, dark brown. Cephalic pits well-developed. Chelicerae 0·30 long. Legs brown. Tibial spines 2.2.1.1. Metatarsi I-III each with a trichobothrium. TmI 0·50. Leg I — 2·33 long (0·65 + 0·20 + 0·58 + 0·50 + 0·40), IV — 2·54 long (0·70 + 0·23 + 0·68 + 0·55 + 0·38). Palp as in Figs. 138-140. Abdomen: 1·15 long, 0·68 wide, dark grey.

♀: Total length 2·20. Carapace: 0·85 long, 0·60 wide. PME separated by their 2 D. Chelicerae 0·38 long. Leg I — 2·42 long (0·68 + 0·23 + 0·60 + 0·53 + 0·38), IV — 2·69 long (0·75 + 0·23 + 0·73 + 0·60 + 0·38). Abdomen: 0·48 long, 0·98 wide. Body and leg coloration, chaetotaxy as in ♂. Epigyne as in Fig. 141.

Remarks: This species has hitherto been registered from Tadjikistan (Pamir-Alai, Hissarsky Mt. Ridge) as *Diplocephalus cristatus* (Blackwall 1833) (Andreeva & Tystshenko 1970, Andreeva-Prószyńskaya 1974, Andreeva 1975, 1976).

Donacochara speciosa (Thorell 1875).

1980 *Donacochara speciosa*, — Ovtsharenko & Fet, Ent. Obozr., **59** (2): 444.
1981 *Donacochara speciosa*, — Krivokhatsky & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1981** (1): 47.
1986 *Donacochara speciosa*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 1 ♀ (ZMMU), , USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, Karagachovaya Roshcha, 23.IV.1982; leg. S.Z. — 6 ♀ (ZMMU), 2 ♀ (SMF 34856), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], 1500 m, *Phragmites* near lake, 10.V.1983; leg. S.Z.

Remarks: Within Middle Asia, this species has been registered only from Badhkyz Plateau, Turkmenia (Ovtsharenko & Fet 1980, Krivokhatsky & Fet 1981, Tanasevitch & Fet 1986).

Entelecara acuminata (Wider 1834).

1937 *Entelecara acuminata*, — Spassky & Shnitnikov, Trudy Kazakh. fil. AN SSSR, **2**: 274.
1979 *Entelecara acuminata*, — Tarabaev, Trudy Kazakh. otd. Vses. Ent. Obshch., : 120.

Material: 1 ♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Pravy Talgar Valley, 1600-1800 m, 17.IX.1984; leg. S.O. — 2 ♀ (ZMMU), Zailiysky-Alatau Mt. Ridge, Aksai Valley [4], 1300 m, 28.VIII.1983; leg. Y.M. & C.T. — 1 ♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, Frunze Area, Malinovoye Valley [9], 1300-1700 m, 28.VII.1984; leg. S.O.

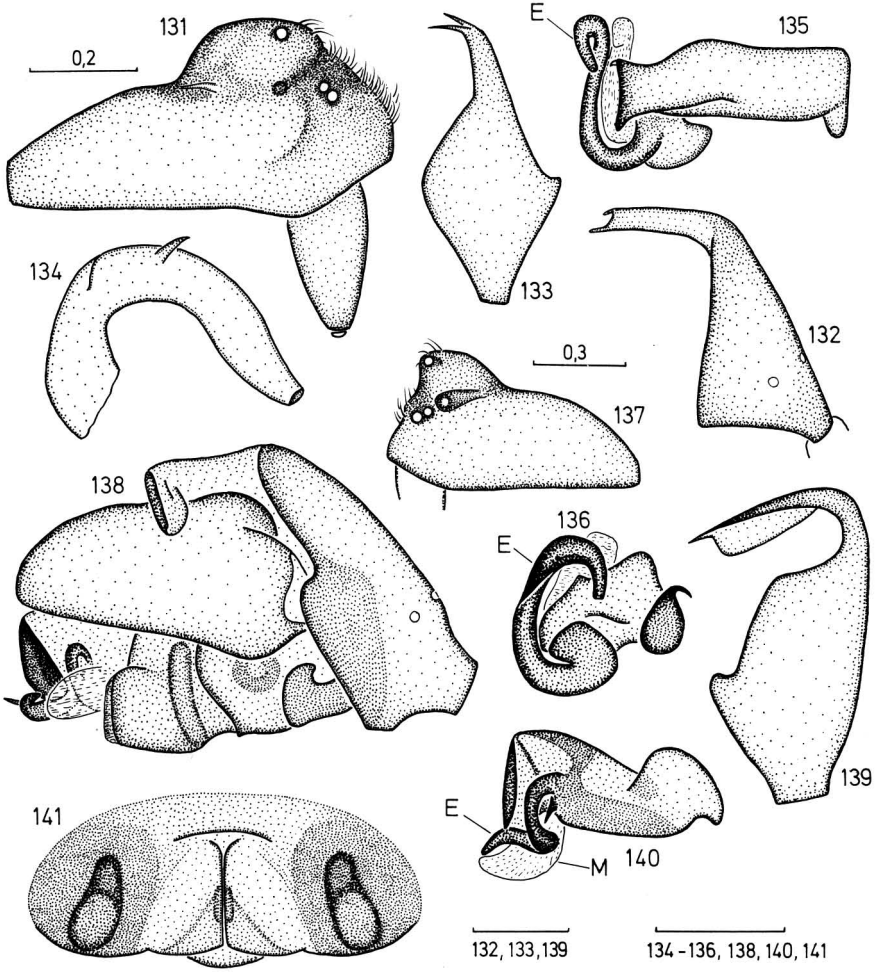
Remarks: In Middle Asia, this species has been recorded also from N-Tien-Shang (Zailiysky-Alatau Mt. Ridge: Spassky & Shnitnikov 1937, Tarabaev 1979).

Erigone amdoensis Schenkel 1963.

1963 *Erigone amdoensis* Schenkel, Mém. Mus. Hist. nat., Zool., **25** (1): 109; figs. (♂ ♀).

Material: 1♂ (ZMMU), USSR, Kirghizia, C-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Koilyu Valley [16], 2800 m, *Picea* forest, 16.VII.1983; leg. S.O.

Remarks: This species has hitherto been known only from Kansu Prov., C-China (Schenkel 1963). New for the USSR fauna.



Figs. 131-141. *Diplocephalus* sp. — 131-136) *bifurcatus* n. sp., ♂ holotype; 137-141) *montanus* n. sp., ♂ holotype and ♀ paratype. — 131, 137) ♂, carapace; 132) ♂, palpal tibia, lateral view; 133, 139) ♂, palpal tibia, dorsal view; 134) ♂, suprategular apophysis; 135-136, 140) ♂, embolic division; 138) ♂, left palp; 141) ♀, epigyne, ventral view.

Erigone atra Blackwall 1833.

1926 *Erigone atra*, — Kulczyński, Ann. Mus. Zool., **27** (1): 32.
1945 *Erigone atra*, — Spassky & Luppova, Ent. Obozr., **28** (1-2): 48.
1952 *Erigone atra*, — Spassky, Ent. Obozr., **32**: 197.
1970 *Erigone atra*, — Andreeva & Tystshenko, Zool. Zh., **49** (1): 41.
1975 *Erigone atra*, — Andreeva, Fragm. faun., **20** (19): 335.
1976 *Erigone atra*, — Andreeva, Pauki Tadjikistana, : 64.
1976 *Erigone atra*, — Bakhvalov & Dereza, Ent. issled. v Kirghizii, **11**: 85.

Material: 1♂ (ZIL), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiyski-Alatau Mt. Ridge, Bolshaya Almatinka Valley [4], 1800-2000 m, 3.VIII.1935; leg. V.S. — 2♂ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m; leg. S.Z. — 2♀ (ZMMU), 3♂ 1♀ (SMF 34857), Kirghizsky Mt. Ridge, near Tyuya-Ashu Pass [10], 3000 m, subalpine meadow, 12.VI.1983; leg. S.O. & S.Z. — 1♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Santash Valley [13], 3000 m, dry subalpine meadow, 23.VII.1983; leg. S.O. — 1♂ 4♀ (ZMMU), Kungey-Alatau Mt. Ridge, Karkara [30], Irisu Valley, 13.VII.1983; leg. S.O. — 3♂ (SMF 34858), Terskey-Alatau Mt. Ridge, Kashkator Valley [23], 2900 m, *Picea-Juniperus* forest, under stones, 25.VIII.1983; leg. A.R. — 1♀ (ZMMU), C-Tien-Shang Mts., Terskey-Alatau Mt. Ridge, Koilyu Valley [16], 2800 m, *Picea* forest, 16.VII.1983; leg. S.O. — 1♀ (ZMMU), Tadjikistan, Pamir Mts., Gorny-Badakhshan Autonomous Region, Sasyk-Kul Lake [65], 4050 m, in grass, 17.VI.1970; leg. E.A.

Remarks: This species has already been known from various localities in Tadjikistan (Surkhob Valley, Zankon, Anzob Pass: Spassky & Luppova 1945, Andreeva & Tystshenko 1970, Andreeva 1975, 1976), Kirghizia (N-Tien-Shang, Chyuiskaya Valley: Bakhvalov & Dereza 1976), as well as from the "Turan zoogeographical province" (Spassky 1952) and "Turkestan" (Kulczyński 1926), both without any locality mentioned.

Erigone dentipalpis (Wider 1834).

1937 *Erigone dentipalpis*, — Vlasov & Sytshevskaja, Trudy Sredneaz. opytn. protivochumn. stantsii AN SSSR, **9**: 250.
1937 *Erigone dentipalpis*, — Spassky & Shnitnikov, Trudy Kazakh. fil. AN SSSR, **2**: 274.
1945 *Erigone dentipalpis*, — Spassky & Luppova, Ent. Obozr., **28** (1/2): 48.
1952 *Erigone dentipalpis*, — Spassky, Ent. Obozr., **32**: 197.
1970 *Erigone dentipalpis*, — Andreeva & Tystshenko, Zool. Zh., **49** (1): 43.
1975 *Erigone dentipalpis*, — Andreeva, Fragm. faun., **20** (19): 335.
1976 *Erigone dentipalpis*, — Andreeva, Pauki Tadjikistana, : 66.
1984 *Erigone dentipalpis*, — Zonstein, Ent. issled. v Kirghizii, **17**: 146.
1986 *Erigone dentipalpis*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 1♀ (ZMMU), USSR, Uzbekistan, Karakalpakskaya ASSR, near Nukus [42], rice fields, 24.IV.1981; leg. R.K. — 3♂ 2♀ (ZMMU), W-Tien-Shang Mts., Namangan Area, Kuraminsky Mt. Ridge, Uigur-Sai [40], 9.IX.1985; leg. S.O. — 2♀ (ZMMU), Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Kampyrtepa Valley [46], in grass near spring, 18.V.1984; leg. A.T. — 1♀ (ZMMU), Turkmenia, Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1200-1300 m, under stones on slope, 9.V.1984; leg. A.T. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Frunze Area, Nizhnechyuisk [12], 20.X.1984; leg. S.O. — 4♂ 1♀ (ZMMU), Kirghizsky Mt. Ridge, Tyuya-Ashu Pass [10], 3000-3400 m, 6.VIII.1985; leg. S.Z. — 1♀ (ZMMU), Issyk-Kul Area, Kungey-

Alatau Mt. Ridge, Karkara [30], Irisu Valley, 13.VII.1983; leg. S.O. — 1♂ 2♀ (ZMMU), 2♂ 1♀ (SMF 34859), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Juglans regia* forest, litter near spring, 24.-27.IX.1983; leg. K.E. — 2♀ (ZIL), Tadjikistan, Pamir-Alai Mts., Komsomolobad Area, Peter-I Mt. Ridge, Sangvor State Reserve [61], 1800 m, 17.VII.1978; leg. V.O.

Remarks: In Middle Asia, this species has been known from various localities in Turkmenia (Vlasov & Sytshevskaja 1937, Tanasevitch & Fet 1986), Tadjikistan (Spassky & Luppova 1945, Andreeva & Tystshenko 1970, Andreeva 1975, 1976), Kirghizia (Zonstein 1984), Kazakhstan (Spassky & Shnitnikov 1937), and the "Turan zoogeographical province" (Spassky 1952).

Erigone remota L. Koch 1869.

Material: 1♂ 1♀ (ZMMU), USSR, Kirghizia, C-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Chon-Ashu Pass [16], 3500 m, 22.VII.1983; leg. S.O.

Remarks: This species is new for the Middle Asian fauna.

Erigone vagans Savigny & Audouin 1825.

1875 *Erigone dentipalpis* Kroneberg, Izv. Obshch. lyubit. estestv., antrop. i etnogr., **19** (3): 8.
1932 *Erigone dentipalpis,* — Charitonov, Beilage Ann. Mus. Zool., **32**: 99; Turkestan.
1952 *Erigone vagans,* — Spassky, Ent. Obozr., **32**: 197.
1970 *Erigone vagans,* — Andreeva & Tystshenko, Zool. Zh., **49** (1): 43.
1974 *Erigone vagans,* — Bronstein & Murtazaev, Trudy Samarkand. gos. Univ., (NS), **247**: 138.
1975 *Erigone vagans,* — Andreeva, Fragm. faun., **20** (19): 335.
1976 *Erigone vagans,* — Andreeva, Pauki Tadjikistana, : 66.
1983 *Erigone vagans,* — Fet, Ent. Obozr., **62** (4): 839.
1984 *Erigone vagans,* — Zonstein, Ent. issled. v Kirghizii, **17**: 146.
1986 *Erigone vagans,* — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 1♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, VI.-VIII.1979; leg. S.Z. — 4♂ 2♀ (ZMMU), 5♂ 2♀ (SMF 34860), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Juglans regia* forest, litter, 24.-27.IX.1983; leg. K.E. — 1♀ (ZMMU), Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Chatkalsky Mt. Ridge, Chatkal State Reserve [36], Bash-Kyzyl-Sai Valley, 1300 m, along spring, 19.IX.1983; leg. K.E. — 1♂ 5♀ (SMF 34861), Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, near Aktash [47], 450 m, *Phragmites* bush near saline spring, 13.V.1984; leg. A.T. — 5♂ 7♀ (ZMMU), Kuhitang-Tau Mt. Ridge, Kampyrtepa Valley [46], 1600-1800 m, under stones on slope and along spring, 18.-22.V.1984; leg. A.T. — 1♂ 3♀ (ZMMU), Turkmenia, E-Karakum Desert, Chardjou Area, Amudarya River, near Farab [50], Nargyz Island, 9.IV.1983; leg. S.A.

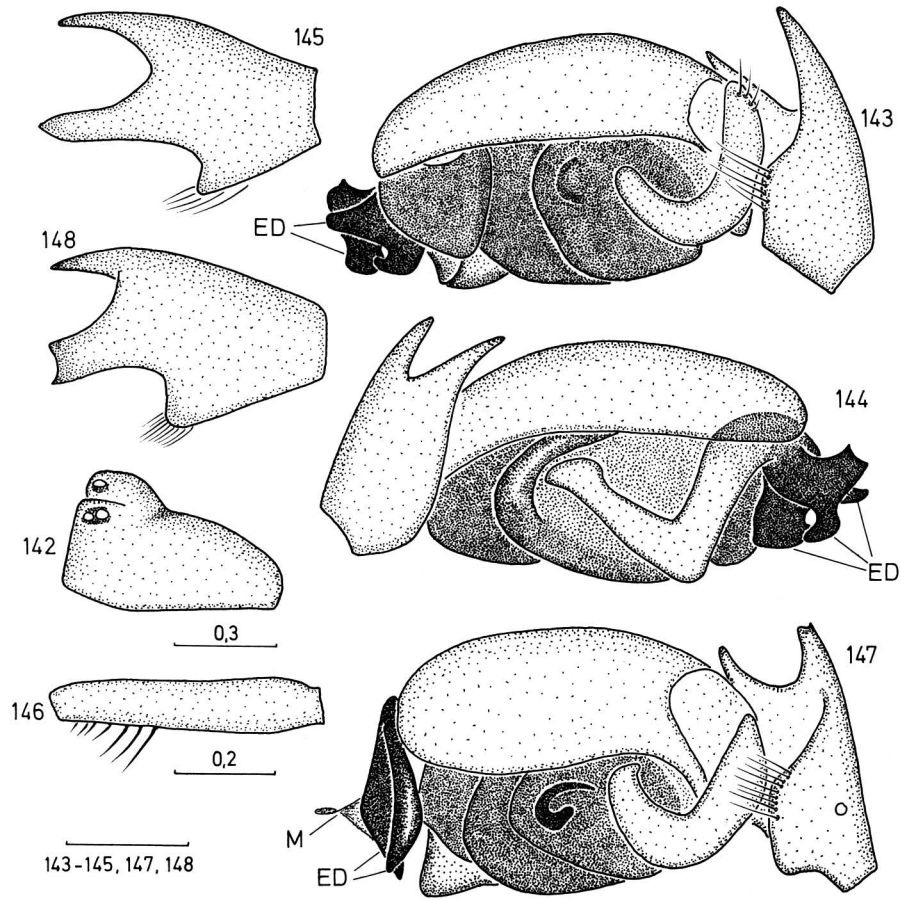
Remarks: This species has hitherto been known from Turkmenia (Fet 1983, Tanasevitch & Fet 1986), Uzbekistan (Kroneberg 1875, Charitonov 1932, Bronstein & Murtazaev 1974), Tadjikistan (Andreeva & Tystshenko 1970, Andreeva 1975, 1976), Kirghizia (Zonstein 1984) and the "Turan zoogeographical province" (Spassky 1952).

Erigonoplus kirghizicus n. sp.

Figs. 142-146.

Holotype: ♂ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Djambul Area, Kindiktas Mts., Kurdai Pass [2], 1200 m, 14.VI.1983; leg. S.O. & S.Z.

Diagnosis: The new species seems especially closely related to *minaretifer* Eskov 1986 met within the mountains of E-Siberia (Eskov 1986): both species are characterized by a highly complex embolic division (around the embolus), thus marking them very distinct among congeners. However, the new taxon differs from *minaretifer* by the shape of the carapace [more similar to that of *ninae* Tanasevitch & Fet 1986, *globipes* (L. Koch 1874) or *jarmilae* (Miller 1943)] and certain details of the embolic division.



Figs. 142-148. *Erigonoplus* sp. — 142-146) *kirghizicus* n. sp., ♂ holotype; 147-148) *ninae*, ♂ from Kopetdagh. — 142) ♂, carapace; 143-144, 147) ♂, left palp; 145, 148) ♂, palpal tibia, dorsal view; 146) ♂, femur I.

Description, ♂ (♀ unknown): Total length 1·58. Carapace (Fig. 142): 0·63 long, 0·55 wide, blackish-brown. PME separated by their 2·5 D. Chelicerae 0·25 long. Legs greyish-brown. Tibial spines 1.1.1.1, very short. Metatarsi I-III each with a trichobothrium. TmI 0·39. Leg I — 1·83 long (0·53 + 0·18 + 0·43 + 0·39 + 0·30), IV — 2·12 long (0·63 + 0·18 + 0·50 + 0·48 + 0·33). Femur I as in Fig. 146. Palp (Figs. 143-145): Tibia distally branching into two subequal branches. Embolic division around embolus of complex shape, well-sclerotized, black. Tegular apophysis flat, very broad. Abdomen: 1·15 long, 0·70 wide, black, dorsally with rare long spines.

Erigonoplus ninae Tanasevitch & Fet 1986.

Figs. 147-148.

1986 *Erigonoplus ninae* Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 38; figs. (♂ ♀).

Remarks: This species is known only from its locus typicus in Kopetdagh Mts.

Gnathonarium dentatum (Wider 1834).

Material: 2♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, 4.VI.1980; leg. S.Z. — 1♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 3000 m, dry alpine meadow, 23.VII.1983; leg. S.O. — 4♀ (ZMMU), bank of Issyk-Kul Lake, near Dolinka [24], 1600 m, 26.VI.1980; leg. S.Z. — 17♂ 18♀ (ZMMU), 7♂ 7♀ (SMF 34862), W-Tien-Shang Mts., Osh Area, Ferganasky Mt. Ridge, near Yarodar [17], 1500 m, swampy meadow near lake, 10.V.1983; leg. A.T. — 2♀ (ZMMU), Tadjikistan, Pamir-Alai Mts., Dushanbe Area, Aruk-Tau Mt. Ridge, Gandjino [?], 700-800 m, 31.V.1969; leg. T.D.

Remarks: This species is new for the Middle Asian fauna.

Gonatium rubens (Blackwall 1833).

Material: 10♂ 14♀ (ZMMU), 4♂ 6♀ (SMF 34863), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1. & 2.IX.1983; leg. Y.M. & C.T. — 1♂ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2000 m, *Picea* forest, litter, 8.IX.1983; leg. A.R. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2100-2500 m, 18.VIII.1980; leg. S.Z.

Remarks: This species is new for the Middle Asian fauna.

Gongilidiellum murcidum Simon 1884.

1983 *Gongilidiellum murcidum*, — Fet, Ent. Obozr., **62** (4): 839.
1986 *Gongilidiellum murcidum*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 41.

Remarks: Within Middle Asia, this species has hitherto been registered in W-Kopetdagh, Turkmenia (Fet 1983, Tanasevitch & Fet 1986).

Hilaira frigida montigena (L. Koch 1872).

Material: 2♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Kashkator Valley [23], 2700 m, *Picea-Juniperus* forest, under stones, 25.VIII.1983; leg. A.R. — 1♂ 5♀ (ZMMU), 1♂ 3♀ (SMF 34864), Terskey-Alatau Mt. Ridge, Barskaun Valley [28], 2500 m, 13.VIII.1980; leg. S.O.

Remarks: This species is new for the Middle Asian fauna.

Janetschekia necessaria Tanasevitch 1985.

Figs. 149-151.

1985 *Janetschekia necessaria* Tanasevitch, Ent. Obozr., **64** (4): 849; figs. (♂).

Material: 1♂ (ZMMU), USSR, Turkmenia, Chardjou Area, E-Karakum Desert, Amudarya River, near Farab [50], Nargyz Island, *Calamagrostis* grassland, 17.IV.1983; leg. S.A.

Remarks: This species has recently been described by ♂♂ from W-Tien-Shang (Chatkalsky & Fergansky Mt. Ridges: Tanasevitch 1985). It seems closely related to the only congener (type species) *monodon* (O. Pickard-Cambridge 1872) restricted to the Alps. Unfortunately, the ♀ is still unknown.

Lasiargus hirsutus (Menge 1869).

Material: 1♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Rigde, Barskaun Valley [28], 2500 m, 13.VIII.1984; leg. S.O.

Remarks: This species is new for the Middle Asian fauna.

Maso sundevalli (Westring 1851).

1984 *Maso sundevalli*, — Zonstein, Ent. issled. v Kirghizii, **17**: 147.

Material: 3♂ 1♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1500 m, *Juglans regia* forest, litter, 2.V.1983; leg. A.T. — 1♂ 5♀ (ZMMU), Fergansky Mt. Ridge, near Yarodar [17], 1500 m, *Juglans regia* forest, litter, VI.1983; leg. S.Z. — 1♀ (ZMMU), Inner Tien-Shang Mts., 50 km N of Naryn, Karatau Mts., Ala-Mushik Valley [31], 2500 m, *Betula* forest along spring, litter, 22.VIII.1983; leg. A.R.

Remarks: Within Middle Asia, this species has heretofore been registered only in Fergansky Mt. Ridge (W-Tien-Shang) (Zonstein 1984).

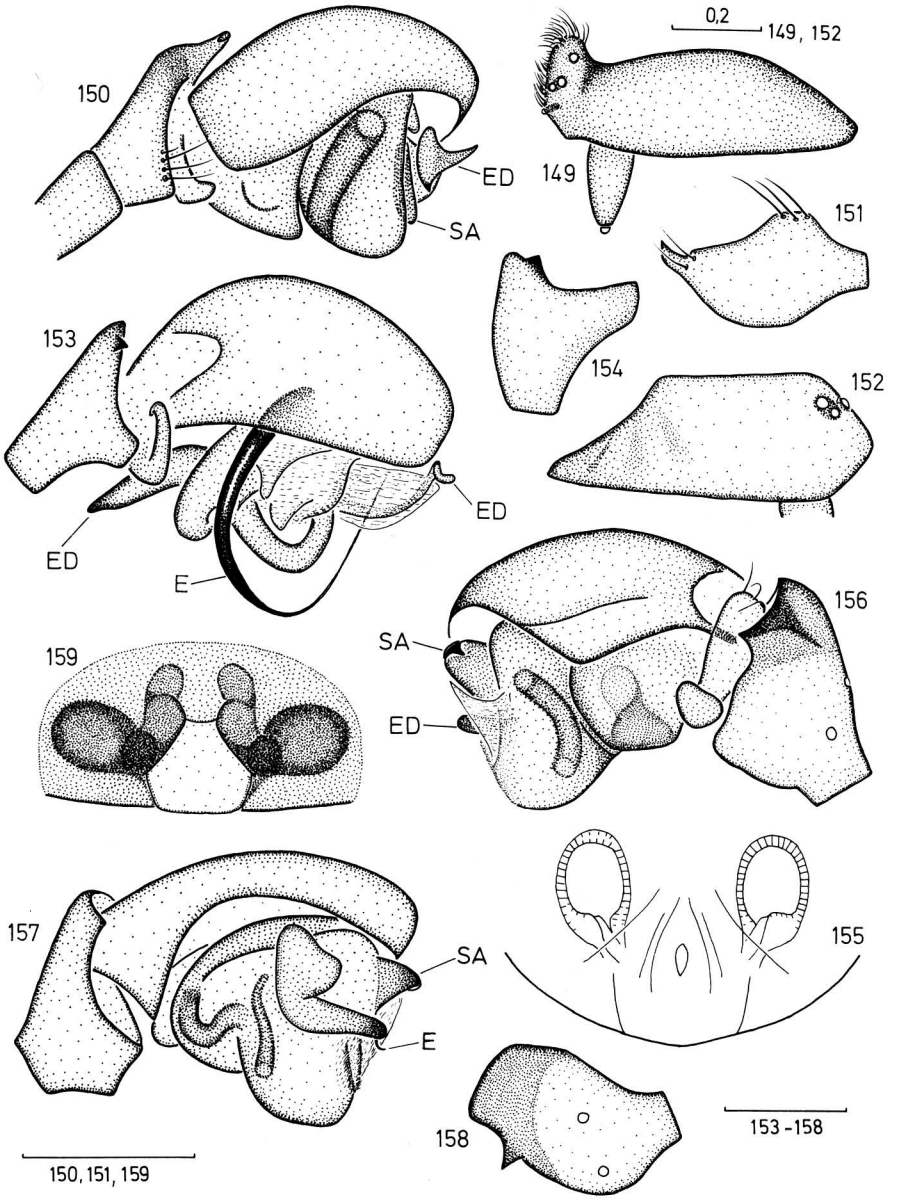
Mecopisthes orientalis Tanasevitch & Fet 1986.

Figs. 152-155.

1986 *Mecopisthes orientalis* Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 37; figs. (♂♀).

Material: 1♀ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mts., Aidere Valley [54], 800-900 m, 24.IV.1985; leg. S.Z.

Remarks: This species has been described from W-Kopetdagh.



Figs. 149-159. *Janetschekia necessaria,* ♂ from Chatkalsky Mt. Rigde (149-151); *Mecopisthes orientalis,* ♂ ♀ from Kopetdagh (152-155); *Mecynargus asiaticus* n. sp., ♂ holotype (156-159). — 149, 152) ♂, carapace; 150, 153) ♂, right palp; 151, 154, 158) ♂, palpal tibia, dorsal view; 155) ♀, vulva, ventral view; 159) ♀, epigyne, ventral view; 156-157) ♂, left palp.

Mecynargus (Mecynargus) asiaticus n. sp.

Figs. 156-159.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Kashkator Valley [23], 2700 m, *Picea-Juniperus* forest, under stones, 25.VIII.1983; leg. A.R.

Paratypes: 6♀ (ZMMU), 2♀ (SMF 34865), Terskey-Alatau Mt. Ridge, Chon-Kyzylsu Valley [23], Karabatkak, 2600 m, *Picea* forest, moss, 2.IX.1983; leg. A.R. — 1♂ 3♀ (ZMMU), Terskey-Alatau Mt. Ridge, 25 km S of Pokrovka [23], Kochevnik, 2500 m, *Picea* forest, litter, 29.VIII.1984; leg. N.T. — 4♀ (ZMMU), 4♀ (SMF 34866), Terskey-Alatau Mt. Ridge, 30 km S of Pokrovka [23], Ailama, 2800 m, *Picea* forest, litter, 22.VII.1984; leg. N.T. — 3♀ (ZMMU), Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2000 m, *Picea* forest, litter, 8.IX.1983; leg. A.R.

Diagnosis: The new species is extremely closely related to *longus* Kulczyński 1894, but differs by the presence of a second spine on tibia IV, twice less number of TmI (in *longus* it is 0·85), absence of a tooth on coxa IV, as well as by certain details of the structure of both ♂ palp and epigyne.

Description: ♂: Total length 1·85. Carapace: 0·80 long, 0·63 wide, yellowish-grey. PME separated by their D. Chelicerae 0·33 long. Legs pale brown. Tibial spines 2.2.2.2. Metatarsi I-IV each with a trichobothrium. TmI 0·38. Leg I — 2·41 long (0·65 + 0·23 + 0·55 + 0·53 + 0·45), IV — 2·49 long (0·69 + 0·23 + 0·63 + 0·54 + 0·40). Apical tooth on coxa IV is missing. Palp (Figs. 156-158): Tibia with a retrolateral tooth. Suprategular apophysis short, broad at base, apically unciform. Embolic division elongate, embolus thin, short. Frontal surface of tegulum conically elongate, membranized. Abdomen: 1·00 long, 0·70 wide, grey.

♀: Total length 1·80. Carapace: 0·78 long, 0·55 wide, yellowish-grey, with radial stripes. PME separated by their D. Chelicerae: 0·35 long, anterior margin with six teeth. Legs yellowish-grey, chaetotaxy as in ♂. Leg I — 2·22 long (0·63 + 0·23 + 0·50 + 0·48 + 0·38), IV — 2·40 long (0·68 + 0·23 + 0·60 + 0·53 + 0·36). Abdomen: 1·00 long, 0·63 wide, grey. Epigyne as in Fig. 159.

Remarks: Millidge (1977) was the first to have synonymized *Rhaebothorax* Simon 1926 with the then monotypical genus *Mecynargus* Kulczyński 1894, and correctly indicated their close affinities inter se. However, accepting the above synonymy, I still retain both names to nominate two subgenera of *Mecynargus* reflecting two phyletic lineages within this monophyletic genus distinguishable by the presence of a trichobothrium on tibia IV.

Besides, *Conigerella* Holm 1967 erected for *Typhochrestus borealis* Jackson 1930 is, to my mind, also congeneric with *Mecynargus*, being a junior synonym of *Rhaebothorax* (thus lacking any peculiarities even at a subgeneric level), while *borealis* ought to be assigned to *Mecynargus* (n. syn., n. comb.).

Mecynargus (Rhaebothorax) tungusicus (Eskov 1981).

1981 *Rhaebothorax tungusicus* Eskov, Zool. Zh., **60** (4): 502; figs. (♂ ♀).

Material: 1♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, NE part of Issyk-Kul Depression [30], 2200-2500 m, *Picea* forest, litter, 1980; leg. S.Z.

Remarks: This species is also widespread in the boreo-hyparctic belt of Siberia and reaches even the southern part of tundra in the USSR European territory. The boreo-alpine disjunction of its range is obviously of Pleistocene origin (s. remarks under *Tibioplus tachygynoides* n. sp.). New for the Middle Asian fauna.

Mesasigone n. g.

Type species: *Mesasigone mira* n. sp.

Diagnosis: Small erigonine, size less than 2 mm. Tibial spines 2.2.2.2. Metatarsi I-III each with a trichobothrium. TmI — 0·20-0·25. Frontal surface of chelicerae toothless. Palpal tibia in ♂ without apophyses. Paracymbium large, toothless. Suprategular apophysis short, linyphiine-like. Radical part of embolic division well-developed. Embolus short, membranous. Epigyne as in Fig. 163.

Remarks: The new genus seems to possess such a unique combination of characters that it is impossible to outline its more or less close affinities at the moment.

Mesasigone mira n. sp.

Figs. 160-163.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Malinovoye Valley [9], 1800 m, 27.VII.1983; leg. S.O.

Paratypes: 2♂ 3♀ (ZMMU), Frunze Area, Chuiskaya Valley, Djangy-Pakhta [12], 15.VIII.1985; leg. S.O. — 1♂ (ZMMU), Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 11.VIII.1984; leg. S.O. — 1♂ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Djambul Area, near Georgievka [3], 600-800 m, 25.X.1984; leg. S.O. — 1♂ 3♀ (ZMMU), 2♂ 3♀ (SMF 34867), Uzbekistan, W-Tien-Shang Mts., Namangan Area, Kuraminsky Mt. Ridge, near Kamchik Pass [39], 2300 m, 10.IV.1985; leg. S.O. — 1♂ 1♀ (ZMMU), Turkmenia, Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1300 m, in grass near stream, 23.V.1985; leg. A.T.

Decription, ♂: Total length 1·75. Carapace: 0·80 long, 0·65 wide, grey-brown, with a narrow dark margin. PME separated by their D. Chelicerae: 0·35 long, anterior margin with two teeth lying well off base of claw. Legs pale brown. Tibial spines 2.2.2.2. Metatarsi I-III each with a trichobothrium. TmI 0·23. Leg I — 2·81 long (0·75 + 0·23 + 0·70 + 0·65 + 0·48), IV — 2·81 long (0·75 + 0·23 + 0·68 + 0·70 + 0·45). Palp (Figs. 160-162): see diagnosis. Abdomen: 0·80 long, 0·65 wide, dark grey.

♀: Total length 1·88. Carapace: 0·70 long, 0·58 wide. PME separated by their D. Chelicerae: 0·33 long, anterior margin with three teeth. Leg I — 2·63 long (0·70 + 0·20 + 0·65 + 0·63 + 0·45), IV — 2·55 long (0·70 + 0·20 + 0·65 + 0·60 + 0·40). Abdomen: 1·25 long, 0·88 wide. Epigyne as in Fig. 163. Body and leg coloration, chaetotaxy as in ♂.

Metopobactrus prominulus (O. Pickard-Cambridge 1872).

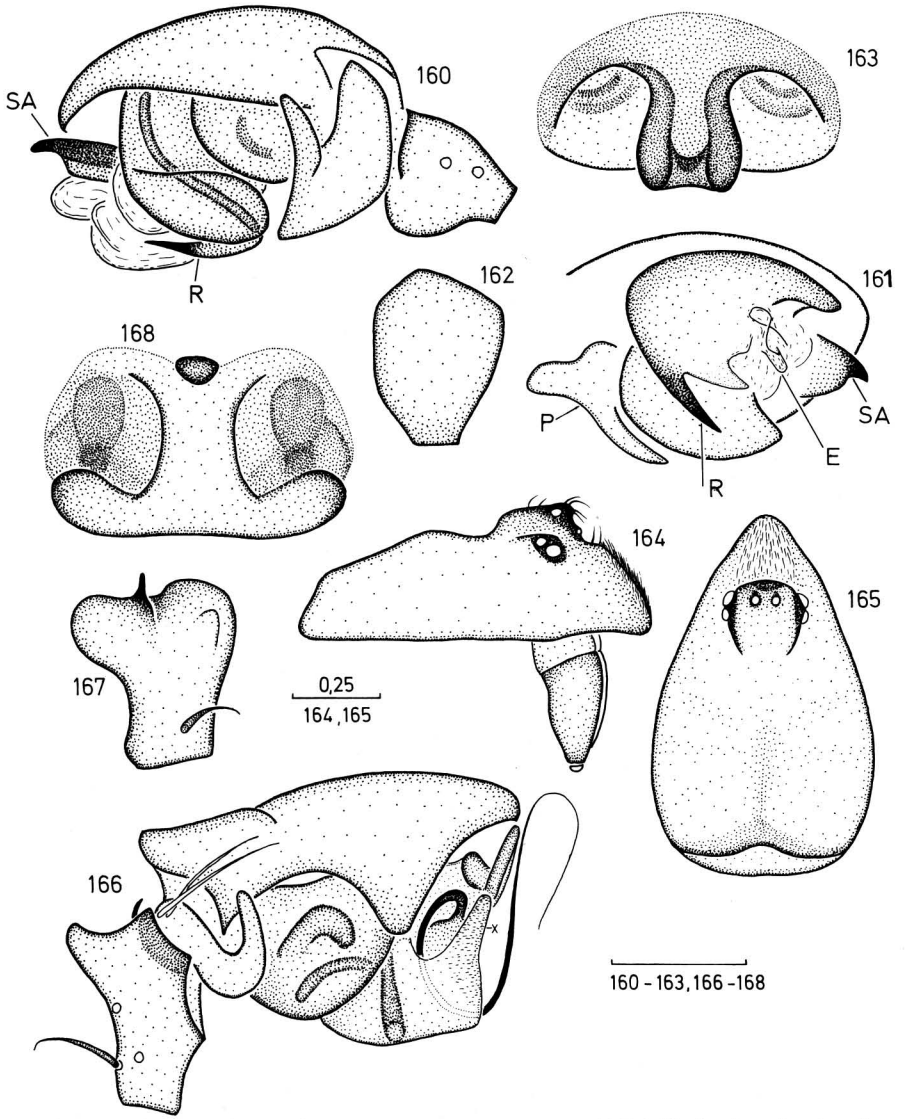
Material: 1♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2200 m, meadow, in grass, 14.VII.1985; leg. S.Z.

Remarks: This species is new for the Middle Asian fauna.

Micrargus subaequalis (Westring 1864).

Material: 2♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1. & 2.IX.1983; leg. Y.M.

Remarks: This species is new for the Middle Asian fauna.



Figs. 160-168. *Mesasigone mira* n. g., n. sp., ♂♀ paratypes (160-163); *Scotinotylus tianschanicus* n. sp., ♂♀ paratypes (164-168). — 160-161) ♂, left palp; 162, 167) ♂, palpal tibia, dorsal view; 163, 168) ♀, epigyne, ventral view; 164-165) ♂, carapace; 166) ♂, right palp.

Microctenonyx subitaneus (O. Pickard-Cambridge 1875).

1984 *Aulacocyba subitanea,* — Zonstein, Ent. issled. v Kirghizii, **17**: 146.
1986 *Aulacocyba subitanea,* — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 40.

Material: 1♂ (ZMMU), USSR, Turkmenia, Chardjou Area, E-Karakum Desert, Amudarya River, near Farab [50], Nargyz Island, bank of river, 9.IV.1983; leg. S.A. — 1♂ (ZMMU), W-Kopetdagh Mt. Ridge, Aidere Valley [54], *Artemisia* grassland, 9.-20.I.1985; leg. T.S.

Remarks: In Middle Asia, this species has been recorded from C-Kopetdagh, Turkmenia (Tanasevitch & Fet 1986) and W-Tien-Shang (Fergansky Mt. Ridge: Zonstein 1984).

Milleriana inerrans (O. Pickard-Cambridge 1885).

Material: 1♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Pravy Talgar Valley, 1600-1800 m, 17.IX.1984; leg. S.O. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Issyk-Ata Valley [11], 1700 m, 24.VI.1984; leg. S.O. — 1♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Kashkator Valley [23], 2700 m, *Picea-Juniperus* forest, under stones, 25.VIII.1983; leg. A.R. — 1♂, 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2500 m, *Picea* forest, 18.VII.1984; leg. S.O. — 3♀ (SMF 34868), Terskey-Alatau Mt. Ridge, Barskaun Valley [28], 2500 m, 13.VIII.1984; leg. S.O. — 1♀ (ZMMU), Inner Tien-Shang Mts., Naryn Area, Naryn-Tau Mt. Ridge, Sary-Bulak Valley [32] 2200 m, swampy meadow, 21.VII.1983; leg. A.R.

Remarks: This species is new for the Middle Asian fauna.

Minicia kirghizica Tanasevitch 1985.

Figs. 169-173.

1985 *Minicia kirghizica* Tanasevitch, Ent. Obozr., **64** (4): 851; figs. (♂ ♀).

Material: 1♂ 6♀ (ZMMU), 1♂ 3♀ (SMF 34869), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1.IX.1983; leg. Y.M. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 11.VIII.1984; leg. S.O. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2100 m, 15.VII.1985; leg. S.Z.

Remarks: This species has recently been described from N-Tien-Shang (Terskey-Alatau Mt. Ridge and Issyk-Kul Lake: Tanasevitch 1985).

Minicia marginella (Wider 1834).

Material: 1♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, Djelandy Valley [14], 2200 m, 26.VI.1980; leg. S.Z.

Remarks: This species is new for the Middle Asian fauna.

Minyrioloides trifrons (O. Pickard-Cambridge 1863).

Material: 1♀ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 4.VII.1985; leg. S.O.

Remarks: This species is new for the Middle Asian fauna.

Oedothorax apicatus (Blackwall 1850).

1875 *Erigone bicuspidata,* — Kroneberg, Izv. Obshch. lyubit. estestv., antrop. i etnogr., **19** (3): 8.
1932 *Hypomma cornuta,* — Charitonov, Beilage Ann. Mus. Zool. **32**: 94. — Turkestan.
1952 *Hypomma cornuta,* — Spassky, Ent. Obozr., **32**: 197.
1970 *Oedothorax retusus,* — Andreeva & Tystshenko, Zool. Zh., **49** (1): 38.
1975 *Dismodicus elevatus,* — Andreeva, Fragm. faun., **20** (19): 335.
1975 *Oedothorax retusus,* — Andreeva, Fragm. faun., **20** (19): 335.
1976 *Dismodicus elevatus,* — Andreeva, Pauki Tadjikistana, : 61.
1976 *Oedothorax retusus,* — Andreeva, Pauki Tadjikistana, : 61.
1986 *Oedothorax apicatus,* — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 41.

Material: 1♂ (ZMMU), USSR, Uzbekistan, Karakalpakskaya ASSR, near Nukus [42], rice fields, 24.IV.1981; leg. R.K. — 1♂ 4♀ (ZMMU), W-Tien-Shang Mts., near Tashkent [41], bank of Chirchik River, under stones, 7.IV.1982; leg. A.T. — 12♂ 21♀ (ZMMU), 2♂ 8♀ (SMF 34870), Pamir-Alai Mts., Kuhitang-Tau Mt. Ridge, Kampyrtepa Valley [46], 1400-1800 m, in grass near spring, 16.-22.V.1984; leg. A.T. — 1♂ 3♀ (ZMMU), Turkmenia, Pamir-Alai Mts., Chardjou Area, Kuhitang-Tau Mt. Ridge, near Khodjapil-Ata [49], 1200 m, under stones near lake, 23.V.1985; leg. A.T. — 1♂ 4♀ (SMF 34871), W-Kopetdagh Mt. Ridge, Aidere Valley [54], 800-900 m, 24.-29.IV.1985; leg. S.Z. — 2♂ 5♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Frunze Area, Nizhnechyuisk [12], 550 m, 20.X.1984; leg. S.O. — 2♀ (ZMMU), Issyk-Kul Area, Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2500 m, *Picea* forest, litter, 18.VII.1984; leg. S.O. — 2♂ 1♀ (ZMMU), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], swampy meadow, 1500 m, 10.V.1983; leg. A.T. — 1♀ (ZMMU), Fergansky Mt. Ridge, near Uzgen [21], 1300-1800 m, forest, 14.IV.1984; leg. S.R. — 1♀ (ZMMU), Pamir-Alai Mts., Osh Area, near Aravan [27], 800-1000 m, 25.III.1983; leg. S.R. — 1♀ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Djambul Area, Kindiktas Mts., near Georgievka [3], 600-800 m, 24.V.1984; leg. S.O. — 1♀ (ZMMU), Tadjikistan, W-Pamir Mts., Gorny-Badakhshan Autonomous Region, Darvazsky Mt. Ridge, Pyandzh Valley, Vyshkharv [63], 22.IX.1970; leg. E.A.

Remarks: In Middle Asia, this species has heretofore been known from the Pamir-Alai Mts. (Turkestansky & Hissarsky Mt. Ridges: Kroneberg 1875; Charitonov 1932; Spassky 1952; Andreeva & Tystshenko 1970; Andreeva 1975, 1976) and the Kopetdagh Mts., Turkmenia (Tanasevitch & Fet 1986).

Oedothorax meridionalis Tanasevitch 1987.

1987 *Oedothorax meridionalis* Tanasevitch, Senckenbergiana biol., **67** (4/6): 355; figs. (♂♀).

Material: 1♂ (ZMMU), USSR, Kirghizia, Inner Tien-Shang Mts., Naryn Area, 50 km N of Naryn, Karatau Mts., Ala-Myshik Valley [31], 2500 m, *Betula* forest, litter, 22.VIII.1983; leg. A.R.

Remarks: This species has already been recorded from Middle Asia (Karatau Mt. Ridge in Inner Tien-Shang), as well as from the Caucasus (TANASEVITCH 1987a).

Panamomops pamiricus n. sp.

Figs. 214-216.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Pamir Mts., Osh Area, N slope of Zaalaisky Mt. Ridge, near Bordaba [35], 3500 m, 7.X.1970; leg. L.Z.

Diagnosis: This species is well distinguishable from other congeners by the form of palpal tibia.

Description, ♂ (♀ unknown): Total length 1·25. Carapace (Figs. 214-215): 0·70 long, 0·53 wide, brown, horns missing, cephalic pits well-developed. PME separated by their 2 D. Chelicerae 0·30 long. Legs pale brown. Tibial spines torn off. Leg I — 1·69 long (0·50 + 0·18 + 0·40 + 0·33 + 0·28), IV — 1·73 long (0·50 + 0·18 + 0·45 + 0·35 + 0·25). Metatarsi I-III each with a trichobothrium. TmI 0·39. Palp as in Figs. 216-217. Abdomen: 0·63 long, 0·35 wide, dark grey.

Pelecopsis laptevi TANASEVITCH & FET 1986.

Figs. 174-177.

1980 *Pelecopsis nemoralis*, — OVTSHARENKO & FET, Ent. Obozr., **59** (2): 444.
1981 *Pelecopsis sp.* KRIVOKHATSKY & FET, Izv. Akad. nauk Turkmen. SSR, Biol., **1981** (1): 47.
1986 *Pelecopsis laptevi* TANASEVITCH & FET, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 35; figs. (♂).

Material: 4♂ 4♀ (ZMMU), 3♂ 3♀ (SMF 34796), USSR, Turkmenia, Mary Area, Badhkyz Plateau [52], Kyzyl-Djar, 17.-28.II.1978; leg. V.K.

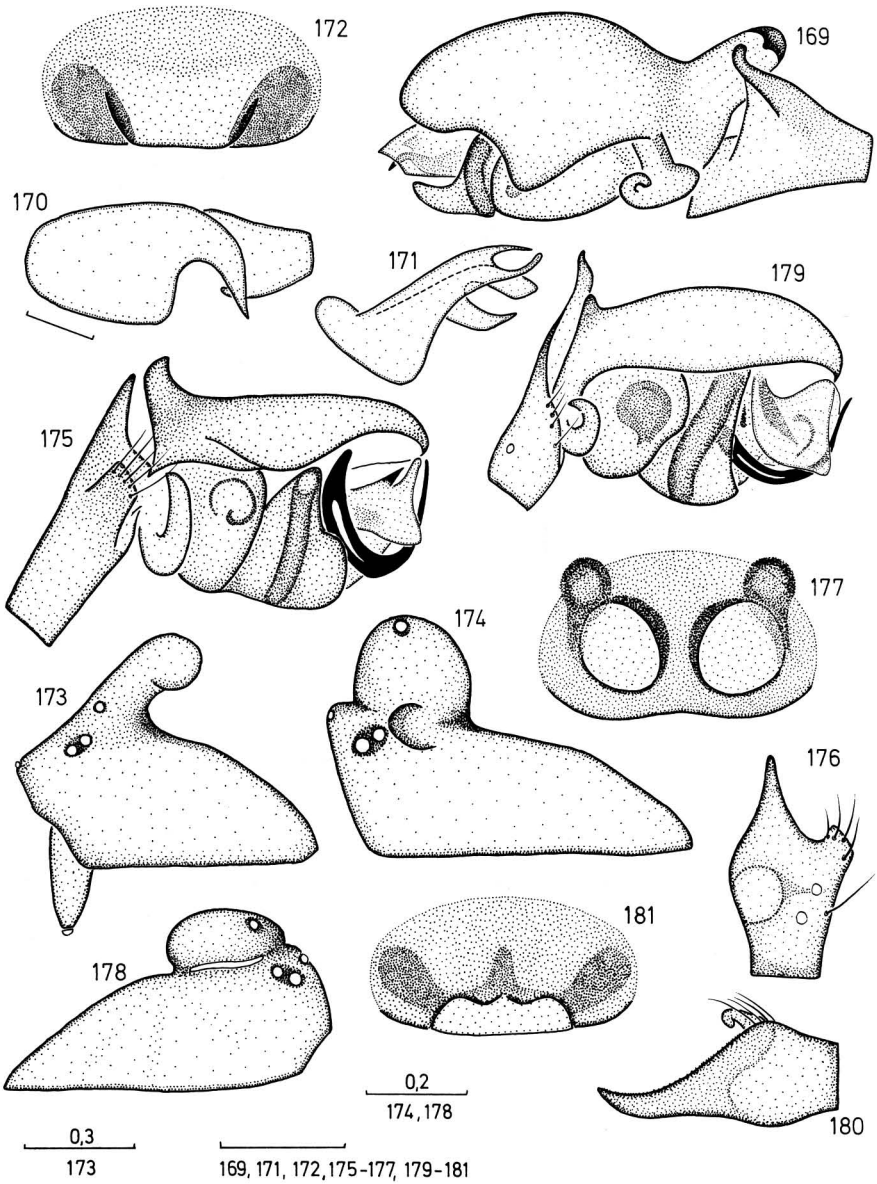
Description, ♀: Total length 1·68. Carapace: 0·63 long, 0·60 wide, dark brown. Cephalic part of carapace slightly elevated. PME separated by their 2 D. Chelicerae 0·23 long. Legs reddish-brown. Tibial spines 1.1.1.1. Metatarsi I-III each with a trichobothrium. TmI 0·55. Leg I — 1·54 long (0·45 + 0·18 + 0·38 + 0·28 + 0·25), IV — 1·87 long (0·58 + 0·18 + 0·50 + 0·36 + 0·25). Abdomen: 1·20 long, 0·90 wide, black. Epigyne as in Fig. 177.

Remarks: This species is known only from Badhkyz Plateau, Turkmenia (OVTSHARENKO & FET 1980, KRIVOKHATSKY & FET 1981, TANASEVITCH & FET 1986), and is characterized by the presence of a large proximal outgrowth of the cymbium [cp. with *suzanae* (SIMON 1915)]. This is the first description of the ♀ of *laptevi!*

Pelecopsis parallela (WIDER 1834).

Material: 1♀ (ZMMU), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, near Kopal [7], IX.1932; leg. V.S. — 1♀ (ZMMU), Djambul Area, Kindiktas Mts., near Georgievka [3], 600-800 m, 11.VI.1983; leg. S.O. — 4♀ (ZMMU), 2♀ (SMF 34872), Kirghizia, W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], 1400 m, dry limestone rocks, under stones, 8.V.1983; leg. A.T.

Remarks: This species is new for the Middle Asian fauna.



Figs. 169-181. *Minicia kirghizica,* ♂ ♀ from Terskey-Alatau Mt. Ridge (169-173); *Pelecopsis laptevi,* ♂ ♀ from Badhkyz (174-177); *paralleloides,* ♂ ♀ from Kopetdagh (178-181). — 169-170) ♂, left palp; 171) ♂, embolic division; 172, 177, 181) ♀, epigyne, ventral view; 173-174, 178) ♂, carapace; 175, 179) ♂, right palp; 176, 180) ♂, palpal tibia, dorsal view.

Pelecopsis paralleloides Tanasevitch & Fet 1986.

Figs. 178-181.

1986 *Pelecopsis paralleloides* Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 36; figs. (♂ ♀).

Remarks: This species recently described from the W-Kopetdagh Mt. Ridge, Turkmenia (Tanasevitch & Fet 1986), seems very closely related to the widespread *parallela* (Wider 1834), as well as to *odontophorum* (Kulczyński 1895) known only by ♂ from a single locality in the Caucasus. Absent in the materials treated herein.

Pocadicnemis pumila (Blackwall 1841).

Material: 2♀ (ZMMU), 2♀ (SMF 34873), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1. & 2.IX.1983; leg. Y.M.

Remarks: This species is new for the Middle Asian fauna.

Scotargus pilosus Simon 1913.

1975 *Lepthyphantes* sp. 3 Andreeva, Fragm. faun., **20** (19): 334.
1976 *Lepthyphantes* sp. 3 Andreeva, Pauki Tadjikistana, : 60.

Material: 4♀ (ZIL), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Bolshaya Almatinka Valley [4], 2550 m, 8.IX.1933; leg. V.S. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Cholpon-Ata Valley [24], 2100 m, *Picea* forest, 6.V.1983; leg. S.O. — 1♂ (ZMMU), Terskey-Alatau Mt. Ridge, 20 km S of Pokrovka [23], 2000 m, *Picea* forest, 29.VII.1984; leg. N.T. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Barskaun Valley [28], 2000 m, 12.VIII.1984; leg. S.O. — 1♀ (ZMMU), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], Zindan Mt., 2000 m, *Juglans regia* forest, litter, 7.X.1983; leg. S.Z. — 1♀ (ZMMU), 2♀ (SMF 34874), Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1500 m, *Juglans regia* forest, litter along spring, 30.IV.1983; leg. A.T. — 1♂ (ZMMU), Pamir-Alai Mts., Osh Area, Alaisky Mt. Ridge, near Shakhimardan [34], Kurban-Kul Lake, 1700-1800 m, 3.X.1970; leg. E.A.

Remarks: This species has hitherto been registered from the Pamir-Alai Mts. (Hissarsky Mt. Ridge, Anzob Pass) as *Lepthyphantes* sp. 3 (Andreeva 1975, 1976).

Scotinotylus alpigenus (L. Koch 1869).

Material: 24♂ 30♀ (ZMMU), 7♂ 7♀ (SMF 34875), USSR, Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1. & 2.IX.1983; leg. Y.M. — 1♂ 4♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 1800 m, *Picea* & *Crataegus* litter near spring, 9.IX.1983; leg. A.R.

Remarks: This species is new for the Middle Asian fauna.

Scotinotylus tianschanicus n. sp.

Figs. 164-168.

1984 *Scotinotylus clavatus,* — ZONSTEIN, Ent. issled. v Kirghizii, **17**: 147.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 1800 m, *Picea* & *Crataegus* litter near spring, 9.IX.1983; leg. A.R.

Paratypes: 5♂ 5♀ (ZMMU), 4♂ 5♀ (SMF 34876), same locality and data as holotype. — 1♀ (ZMMU), Kungey-Alatau Mt. Ridge, Cholpon-Ata Valley [24], 2000-2500 m, *Picea* forest, 6.V.1983; leg. S.O. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, upper reaches of Tyup River [13], 2700 m, *Picea* forest, litter, 18.VII.1984; leg. S.O. — 3♂ 13♀ (ZMMU), Terskey-Alatau Mt. Ridge, 25-30 km S of Pokrovka [23], Ailama & Kochevnik, 2000-2800 m, *Picea* forest, moss, 18.-31.VII.1984; leg. N.T. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Ashutur Valley [23], 2600 m, near stream, moss, 26.VIII.1983; leg. A.R. — 2♀ (ZMMU), Terskey-Alatau Mt. Ridge, Chon-Kyzylsu Valley [23], Karabatkak, 2560 m, *Picea* forest, moss, litter, 1.IX.1983; leg. A.R. — 1♀ (ZMMU), Frunze Area, Kirghizsky Mt. Ridge, Ala-Archa Valley [9], 1600 m, 28.VI.1983; leg. S.O. — 1♂ 1♀ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], 1600-1800 m, 1.IX.1983; leg. Y.M. — 1♀ (ZIL), Zailiysky-Alatau Mt. Ridge, Bolshaya Almatinka Valley [4], 3.VIII.1935; leg. V.S.

Diagnosis: The new species joins the *antennatus*-group sensu MILLIDGE (1981) and seems particularly closely related to both *clavatus* (SCHENKEL 1927), restricted to the Alps (THALER 1970), and *sacer* (CROSBY 1929), widespread in N-America and recorded in W-Greenland (MILLIDGE 1981), but is distinguishable from both of them, in ♂, by the single dorsal seta on the palpal tibia and a shallower apical concavity of this very joint, presence of two thick and long spines on the paracymbium and of an elongated process on the tegulum and, in ♀, by the less prominent, cusp-like knob of the epigyne.

Description, ♂: Total length 2·03. Carapace (Figs. 164-165): 1·01 long, 0·63 wide, dark brown, with dark radial stripes. PME separated by their 1·5 D. Chelicerae: 0·35 long, anterior margin with four teeth. Legs reddish-brown. Tibial spines 2.2.2.1, short. Metatarsi I-III each with a trichobothrium. TmI 0·58. Leg I — 2·32 long (0·68 + 0·23 + 0·53 + 0·50 + 0·38), IV — 2·61 long (0·80 + 0·23 + 0·65 + 0·60 + 0·33). Palp (Figs. 166-167): Tibia with a single, short, gently curved dorsal seta and a small, sharp, apical tooth. Paracymbium with two thick and long spines. Tegulum with an elongated process (*x*, Fig. 166). Abdomen: 1·15 long, 0·70 wide, dark grey.

♀: Total length 2·08. Carapace: 0·83 long, 0·55 wide, brown. PME separated by their 1·5 D. Chelicerae: 0·35 long, anterior margin with six teeth. Leg I — 2·91 long (0·83 + 0·30 + 0·73 + 0·60 + 0·45), IV — 3·09 long (0·85 + 0·30 + 0·83 + 0·68 + 0·43). Abdomen: 1·35 long, 0·90 wide. Body and leg coloration, chaetotaxy as in ♂. Epigyne as in Fig. 168.

Remarks: This species has hitherto been referred to as *clavatus* (SCHENKEL 1927) by ZONSTEIN (1984) and recorded from the W-Tien-Shang Mts., Fergansky Mt. Ridge.

Silometopus incurvatus (O. Pickard-Cambridge 1873).

1984 *Silometopus incurvatus*, — Zonstein, Ent. issled. v Kirghizii, **17**: 147.

Material: 7♂ 7♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], near Arkit, 1400-1500 m, *Juglans regia* forest, litter, 28.IV.-4.V.1983; leg. A.T. & S.Z. — 2♂ 2♀ (SMF 36650), Fergansky Mt. Ridge, near Yarodar [17], 1400 m, litter along spring, 24.IX.1983; leg. K.E. — 3♂ (ZMMU), Pamir-Alai Mts., Osh Area, Alaisky Mt. Ridge, 45 km W of Sary-Tash [29], 2850 m, 8.X.1970; leg. E.A.

Remarks: In Middle Asia, this species has been registered only from the W-Tien-Shang Mts. (Fergansky Mt. Ridge: Zonstein 1984).

Tapinocyba spoliatrix Tanasevitch 1985.

Figs. 182-183.

1985 *Tapinocyba spoliatrix* Tanasevitch, Ent. Obozr., **64** (4): 850; figs. (♂ ♀).

Remarks: This species is known but from its locus typicus in W-Tien-Shang, Fergansky Mt. Ridge, Zindan Mt. Absent in the materials treated herein.

Tibioplus tachygynoides n. sp.

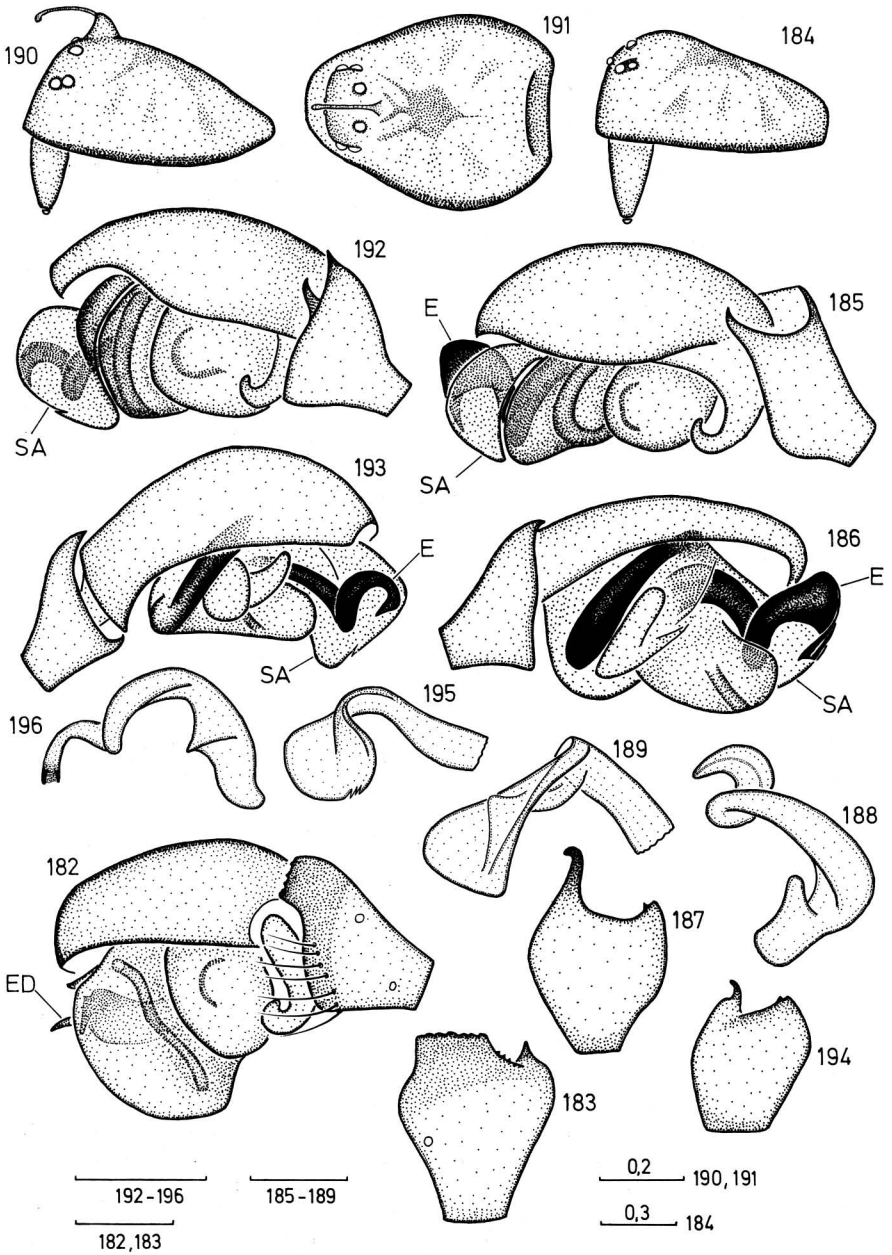
Figs. 209-213.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, 30 km S of Pokrovka [23], Ailama, 2800 m, *Picea* forest, moss, 20.VIII.1984; leg. N.T.

Paratypes: 2♀ (ZMMU), same locality, 15.IX.1984; leg. N.T. — 2♀ (ZMMU), Terskey-Alatau Mt. Ridge, Chon-Kyzylsu Valley [23], Karabatkak, 2500 m, *Picea* forest, moss. 1.IX.1983; leg. A.R. — 1♀ (ZMMU), 2♀ (SMF 34878), Frunze Area, Kirghizsky Mt. Ridge, near Tyuya-Ashu Pass [10], Kara-Balta Valley, 3000 m, subalpine meadow, 12.VI.1983; leg. S.O. & S.Z.

Diagnosis: The new species is closely related to the only currently known congener, *diversus* (L. Koch 1879), widespread along the boreo-hyparctic belt from Fennoscandia to Alaska, but differs from it by the shape of the ♂ palpal tibia, presence of large outgrowths of the embolic division, as well as by the better elongated epigyne. By the form and certain details of the epigyne, *tachygynoides* n. sp. vividly reminds the N-American genus *Tachygyna* Chamberlin & Ivie 1939, this similarity being reflected by the etymology.

Description, ♂: Total length 2·15. Carapace: 0·95 long, 0·73 wide, pale brown, cephalic part not elevated. PME separated by their D. Chelicerae: 0·45 long, frontal surface with a single large tooth, as in Fig. 209. Legs pale brown. Tibial spines 2.2.2.2. Metatarsi I-III each with a trichobothrium. TmI 0·40. Leg I — 2·89 long (0·80 + 0·25 + 0·73 + 0·63 + 0·48), IV — 3·01 long (0·83 + 0·25 + 0·78 + 0·70 + 0·45). Palp (Figs. 210-211): Tibia much elongated dorso-ventrally. Cymbium retro-laterally with a small and shallow cavity. Paracymbium large, distally well-enlarged, boat-shaped. Embolic division extremely well-developed, radical part with several large outgrowths. Embolus thin, not long. Suprategular apophysis wide, well-sclerotized. Abdomen: 1·23 long, 0·70 wide, grey.



Figs. 182-196. *Tapinocyba spoliatrix,* ♂, from Fergansky Mt. Ridge (182-183); *Trachelocamptus asiaticus* n. sp., ♂ paratype (184-189); *monoceros* n. sp., ♂ paratype (190-196). — 182, 185-186, 192-193) ♂, left palp; 183, 187, 194) ♂, palpal tibia, dorsal view; 184, 190-191) ♂, carapace; 188, 196) ♂, embolic division; 189, 195) ♂, suprategular apophysis.

♀: Total length 2·40. Carapace: 1·08 long, 0·70 wide. PME separated by their D. Chelicerae strong (0·45), anterior margin with four teeth. Leg I — 2·91 long (0·83 + 0·30 + 0·73 + 0·60 + 0·45), IV — 3·09 long (0·85 + 0·30 + 0·83 + 0·68 + 0·43). Abdomen: 1·38 long, 0·83 wide. Epigyne well-elongated, well-sclerotized, as in Figs. 212-213. Body and leg coloration, chaetotaxy as in ♂.

Remarks: It seems very likely that *tachygynoides* n. sp. represents the case of a relatively recent speciation due to isolation of some former *diversus* or common *diversus*-like ancestral population(s). Indeed, during the Pleistocene, the periglacial landscapes, along with their extension southward, could have ousted the boreal *diversus*(-like) populations far to the south, thus having enabled their dispersal up to the Tien-Shang Mts. using the mountains of Altai, Tarbagatai, and Djungarsky-Alatau as stepping-stones. Later, during the regressive phase(s) of the Pleistocene, i.e. in an interglacial period or even in the early Holocene, the disjunction might have appeared involving the move northerly of part of the population(s) (*diversus* occupying nowadays the entire boreo-hyparctic belt of Siberia), and the move higher in the mountains within Middle Asia (*tachygynoides* n. sp. being restricted to the altitudinal belts of at least 2500 m a. s. l. and dwelling exclusively in *Picea* forest). In other words, this case is typically a boreo-alpine pattern, with a pair of separate sister-species involved.

Tiso aestivus (L. Koch 1872).

Material: 2♂ 4♀ (ZMMU), 1♂ 2♀ (SMF 34879), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Terskey-Alatau Mt. Ridge, 30 km S of Pokrovka [23], Ailama, 2800 m, *Picea* forest, litter, 19.VII.1984; leg. N.T. — 1♂ 2♀ (ZMMU), same locality, 2000 m, 28.VII.1984; leg. N.T.

Remarks: This species is new for the Middle Asian fauna.

Trachelocamptus asiaticus n. sp.

Figs. 184-189, 198-199.

1986 *Trachelocamptus asiaticus* Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 41 [nomen nudum].

Holotype: ♂ (ZMMU), USSR, Turkmenia, Chardjou Area, E-Karakum Desert, Repetek State Reserve [51], 8.II.1982; leg. V.K.

Paratypes: 8♂ 9♀ (ZMMU), 2♂ 3♀ (SMF 34880), same locality, 8.-28.II.1982; leg. V.K.

Diagnosis: The new species is closely related to *monoceros* n. sp., but differs by the large size, absence of the seta on the cephalic part of the ♂ carapace, structural details of the palp and epigyne; latter's receptacula of *monoceros* n.sp. separated by less than its D, whereas in *asiaticus* n. sp. by 2 D.

Description, ♂: Total length 2·20. Carapace normal, as in Fig. 184, 0·95 long, 0·75 wide, brown, with a dark median spot and dark radial stripes. PME separated by their 1·5 D. Chelicerae: 0·28 long, anterior margin with three teeth. Legs yellow. Tibial spines 2.2.1.1, each as long as ½-⅓ of joint's D. Metatarsi I-III each with a trichobothrium. TmI 0·51. Legs I — 2·79 long (0·78 + 0·22 + 0·70

+ 0·63 + 0·46), IV — 3·29 long (0·91 + 0·22 + 0·87 + 0·80 + 0·49). Palp (Figs. 185-189): Tibia apically emarginate, retrolateral tooth unciform. Suprategular apophysis long, gradually broadening toward apex. Embolus distally flattened and, before apically narrowing, broadened preapically. Abdomen: 1·35 long, 0·90 wide, grey.

♀: Total length 2·25. Carapace: 0·90 long, 0·68 wide. PME separated by their D. Chelicerae: 0·26 long, anterior margin with four teeth. Leg I — 2·44 long (0·69 + 0·24 + 0·59 + 0·53 + 0·39), VI — 2·96 long (0·84 + 0·22 + 0·78 + 0·70 + 0·42). Abdomen: 1·63 long, 1·10 wide. Epigyne and vulva as in Figs. 198-199. Body and leg coloration, chaetotaxy as in ♂.

Remarks: This name has already been mentioned as a nomen nudum earlier (TANASEVITCH & FET 1986).

Trachelocamptus monoceros n. sp.

Figs. 190-196, 200-201.

Holotype: ♂ (ZMMU), USSR, Uzbekistan, W-Tien-Shang Mts., Tashkent Area, Chatkalsky Mt. Ridge, mouth of Chatkal River [38], 1300 m, under stones on dry slope, 20.IV.1982; leg. A.T.

Paratypes: 3♂ 5♀ (ZMMU), 1♂ 2♀ (SMF 34881), same locality and data as holotype.

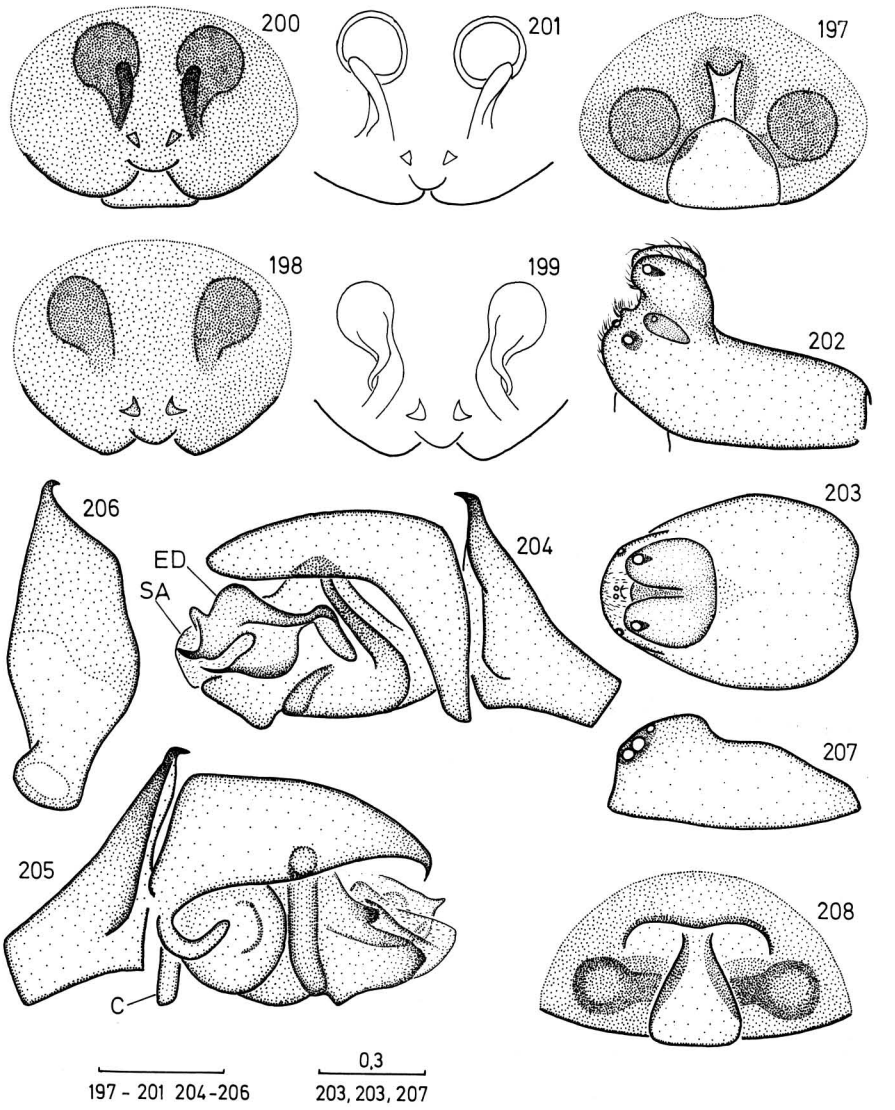
Diagnosis: Besides *asiaticus* n. sp. (see above), the new species is closely related to the N-African *mutabilis* DENIS 1966, sharing with it certain details of the shape of the carapace, palpal tibia of ♂, and epigyne. However, *monoceros* n. sp. differs well from all congeners by the presence of a strong seta on the carapace elevation in ♂, as well as by certain elements of the genitalia.

Description, ♂: Total length 1·23. Carapace (Figs. 190-191): 0·58 long, 0·50 wide, yellowish-red, with a dark median spot and a narrow dark margin. Cephalic part of carapace with a conical elevation carrying a large seta directed cephalad. PME separated by their 3 D. Chelicerae: 0·15 long, anterior margin with two teeth. Legs reddish-yellow. Tibial spines 2.2.1.1. Metatarsi I-III each with a trichobothrium. TmI 0·52. Leg I — 1·56 long (0·43 + 0·15 + 0·41 + 0·32 + 0·25), IV — 1·79 long (0·50 + 0·15 + 0·48 + 0·39 + 0·27). Palp (Figs. 192-196): Tibia apically with an emargination dividing a small prolateral denticle and a large, unciform, retrolateral tooth. Suprategular apophysis long, flattened, distally abruptly broadened. Abdomen: 0·70 long, 0·53 wide, black.

♀: Total length 1·45. Carapace: 0·58 long, 0·53 wide. PME separated by their 1·5 D. Chelicerae: 0·18 long, anterior margin with three teeth. Leg I — 1·64 long (0·49 + 0·17 + 0·42 + 0·34 + 0·22), VI — 1·82 long (0·55 + 0·14 + 0·46 + 0·39 + 0·28). Abdomen: 1·00 long, 0·75 wide. Epigyne and vulva as in Figs. 200-201. Body and leg coloration, chaetotaxy as in ♂.

Remarks: The peculiar strong seta present on a tubercle on the ♂ carapace of *monoceros* n. sp. is shared with a few other erigonine species, such as *Holma bispicata* LOCKET 1974 from Angola, *Proelauna indicatrix* JOCQUÉ 1981 from Malawi, and *"Wubana" hamilifer* DENIS 1936 from Algeria [By the way, the latter generic allocation is highly improbable (s. VAN HELSDINGEN 1974). Perhaps *hamilifer* belongs in *Trachelocamptus* SIMON 1884, though it is very difficult to rely on the very bad drawing of the ♂ palp given by DENIS (1936)].

The discovery of *Trachelocamptus* in Middle Asia extends its known range very considerably: if formerly it was believed to be restricted to the W-Mediterranean, at present it seems rather of an Ancient Mediterranean pattern.



Figs. 197-208. *Tapinocyba spoliatrix*, ♀ from Fergansky Mt. Ridge (197); *Trachelocamptus asiaticus* n. sp., ♀ paratype (198, 199); *monoceros* n. sp., ♀ paratype (200-201); *Trichopterna grummi* n. sp., ♂ ♀ paratype (202-208). — 197-198, 200, 208) ♀, epigyne, ventral view; 199, 201) ♀, vulva, ventral view; 202-203) ♂, carapace; 207) ♀, carapace; 204-205) ♂, right palp; 206) ♂, palpal tibia, dorsal view.

Trichonocoides piscator (Simon 1884).

1970 *Micrargus herbigradus,* — Andreeva & Tystshenko, Zool. Zh., **49** (1): 38.
1975 *Diplocentria bidentata,* — Andreeva, Fragm. faun., **20** (19): 335.
1975 *Micrargus herbigradus,* — Andreeva, Fragm. faun., **20** (19): 335.
1976 *Diplocentria bidentata,* — Andreeva, Pauki Tadjikistana, : 67.
1976 *Micrargus herbigradus,* — Andreeva, Pauki Tadjikistana, : 61.
1986 *Trichoncoides piscator,* — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 41.

Material: 1 ♂ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mt. Ridge, Sumbar Valley [54], 800-1000 m, V. 1974; leg. V.M. — 1♂ 1♀ (ZMMU), 1♂ 1♀ (SMF 34882), Sumbar Valley [54], 800 m, 8.-13.V.1983; leg. S.Z. — 1♂ (ZMMU), Uzbekistan, Pamir-Alai Mts., Surkhandarya Area, Kuhitang-Tau Mt. Ridge, Bagly-Dara Valley [45], 1600 m, *Juniperus* forest, under stones along spring, 27.V.1985; leg. A.T. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Kirghizsky Mt. Ridge, near Frunze [8], 750 m, 7.V.1985; leg. S.O.

Remarks: This species has hitherto been known from Tadjikistan (Hissarskaya Valley, cotton fields) as *Diplocentria bidentata* (Emerton 1882) and *Micrargus herbigradus* (Blackwall 1854) (Andreeva & Tystshenko 1970, Andreeva 1975, 1976), as well as from Turkmenia (W-Kopetdagh: Tanasevitch & Fet 1986).

Trichopterna grummi n. sp.

Figs. 202-208.

Holotype: ♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 6.VII.1985; leg. S.Z.

Paratypes: 3♂ 3♀ (ZMMU), 1♂ 2♀ (SMF 34883), same locality and data as holotype. — 1♀ (ZMMU), Terskey-Alatau Mt. Ridge, Chon-Kyzylsu Valley [23], Karabatkak, 2600 m, *Picea* forest, moss, 2.IX.1983; leg. A.R. — 1♀ (ZMMU), Kazakhstan, N-Tien-Shang Mts., Alma-Ata Area, Zailiysky-Alatau Mt. Ridge, Alma-Ata State Reserve [4], Pravy Talgar Valley, 1800 m, near spring, 1.IX.1983; leg. Y.M.

Derivatio nominis: This species is gladly named after the prominent Russian explorer of Asia, Mr. G. Grumm-Grzimailo, who contributed much to the knowledge of Middle Asian natural history at the turn of this century.

Diagnosis: The new species is characterized by the peculiar shape of the embolic division and short embolus. By the shape of the epigyne, it is close to *Peponocranium ludicrum* (O. Pickard-Cambrigde 1861), but both species are well distinguishable by chaetotaxy (2.2.1.1 in *ludicrum*).

Description, ♂: Total length 1·80. Carapace (Figs. 202-203): 0·75 long, 0·60 wide, dark brown, with dark radial stripes, dull, not puncturated. Tubercle above AME (*x*, Fig. 202) present only in one paratype. Cephalic pits large, oblong. Chelicerae 0·25 long. Legs brown. Tibial spines reduced. Metatarsi I-IV each with a trichobothrium. TmI 0·80. Leg I — 1·59 long (0·43 + 0·18 + 0·38 + 0·35 + 0·25), IV — 2·00 long (0·53 + 0·18 + 0·53 + 0·48 + 0·28). Palp (Figs. 204-206): Tibia elongated, apically narrowed and unciform. Suprategular apophysis elongated, distally well membranized. Embolic division of complex configuration, embolus short. Abdomen: 1·13 long, 0·75 wide, almost entire dorsal surface covered by scutum.

♀: Total length 1·90. Carapace (Fig. 207): 0·70 long, 0·60 wide. PME separated by their 1·5 D. Chelicerae 0·35 long. Tibial spines 1.1.1.1, each as long as ½ D of joint. Leg I — 1·62 long (0·48 + 0·20 + 0·38 + 0·33 + 0·23), IV — 1·98 long (0·60 + 0·20 + 0·53 + 0·40 + 0·25). Abdomen: 1·20 long, 0·85 wide. Dorsal scutum a little smaller than in ♂. Epigyne as in Fig. 208. Body and leg coloration as in ♂.

Typhochrestus inflatus Thaler 1980.

1980 *Typhochrestus inflatus* Thaler, Rev. suisse Zool., **87** (2): 588; figs. (♂♀).
1987 *Typhochrestus inflatus,* — Tanasevitch, Senckenbergiana biol., **67** (4/6): 366.

Material: 1♂ (ZMMU), USSR, Kirghizia, N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Chon-Uryukty Valley [25], 2100 m, 4.VII.1985; leg. S.O. — 1♂ (ZMMU), W-Tien-Shang Mts., Osh Area, Fergansky Mt. Ridge, near Yarodar [17], dry limestone rocks, under stones, 1400 m, 30.IX.1983; leg. K.E. — 1♀ (ZMMU), near Yarodar [17], 1400 m, *Juglans regia* forest, litter, 27.IX.1983; leg. K.E. — 1♀ (ZMMU), Uzbekistan, W-Tien-Shang Mts., Namangan Area, Kuraminsky Mt. Ridge, Kamchik Pass [39], 2300 m, 10.IV.1985; leg. S.O. — 1♀ (ZMMU), 2♀ (SMF 34884), Tashkent Area, Chatkalsky Mt. Ridge, mouth of Chatkal River [38], 1300 m, under stones on slope, 14.IV.1982; leg. A.T.

Remarks: In Middle Asia, this species has hitherto been known from the Fergansky Mt. Ridge, W-Tien-Shang (Tanasevitch 1987a). In the USSR it has been recorded from the Caucasus (op. cit.).

Walckenaeria (Wideria) antica (Wider 1834).

1984 *Walckenaeria antica,* — Zonstein, Ent. issled. v Kirghizii, **17**: 147.

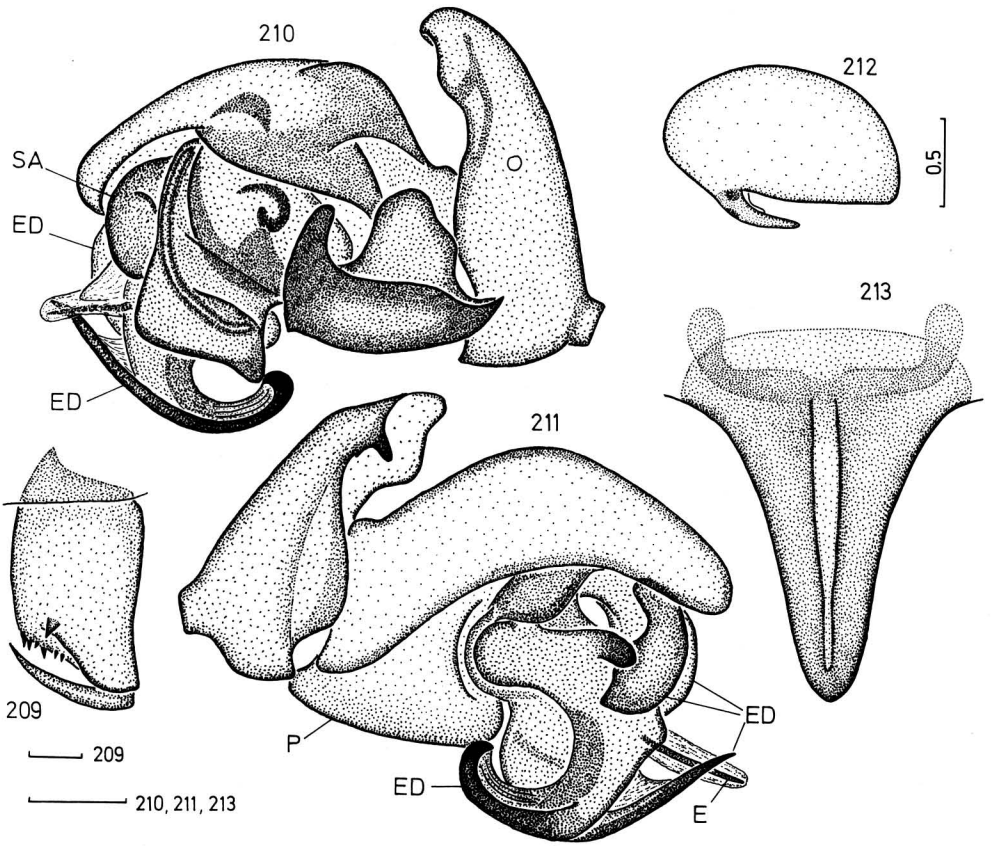
Material: 2♂ 1♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Rigde, Sary-Chelek State Reserve [33], near Arkit, 1400-1500 m, *Juglans regia* forest, litter, 29.IV.-4.V.1983; leg. A.T. & S.Z. — 8♂ 6♀ (ZMMU), 5♂ 4♀ (SMF 34885), Fergansky Mt. Ridge, near Yarodar [17], 1300-1500 m, *Juglans regia* forest, litter, VII.-X.1984; leg. S.Z. — 2♀ (ZMMU), near Yarodar [17], 1500 m, dry limestone rocks, under stones, 30.VIII.1983; leg. K.E. — 1♀ (ZMMU), N-Tien-Shang Mts., Issyk-Kul Area, Kungey-Alatau Mt. Ridge, Karkara [30], Irisu Valley, 1900 m, 13.VII.1983; leg. S.O. — 2♀ (ZMMU), Frunze Area, Kirghizsky Mt. Ridge, Issyk-Ata Valley [11], 1700 m, 24.VI.1984; leg. S.O.

Remarks: This widespread species has hitherto been known in Middle Asia but from W-Tien-Shang, Fergansky Mt. Ridge (Zonstein 1984).

Walckenaeria (Wideria) atrotibialis O. Pickard-Cambridge 1878.

1984 *Walckenaeria melanocephala,* — Zonstein, Ent. issled. v Kirghizii, **17**: 147.

Material: 1♀ (ZMMU), USSR, Kirghizia, W-Tien-Shang Mts., Osh Area, Chatkalsky Mt. Ridge, Sary-Chelek State Reserve [33], Tumanyak, 1400-1600 m, *Picea* forest, litter, 23.VII.-1.VIII.1983; leg. K.M. — 1♂ 3♀ (ZMMU), Fergansky Mt. Ridge, near Yarodar [17], 1400 m, *Juglans regia* forest, litter, VIII.-X.1983; leg. S.Z.



Figs. 209-213. *Tibioplus tachygynoides* n. sp., ♂ holotype and ♀ paratype. — 209) ♂, left chelicera; 210-211) ♂, left palp; 212) ♀, abdomen, lateral view; 213) ♀, epigyne, ventral view.

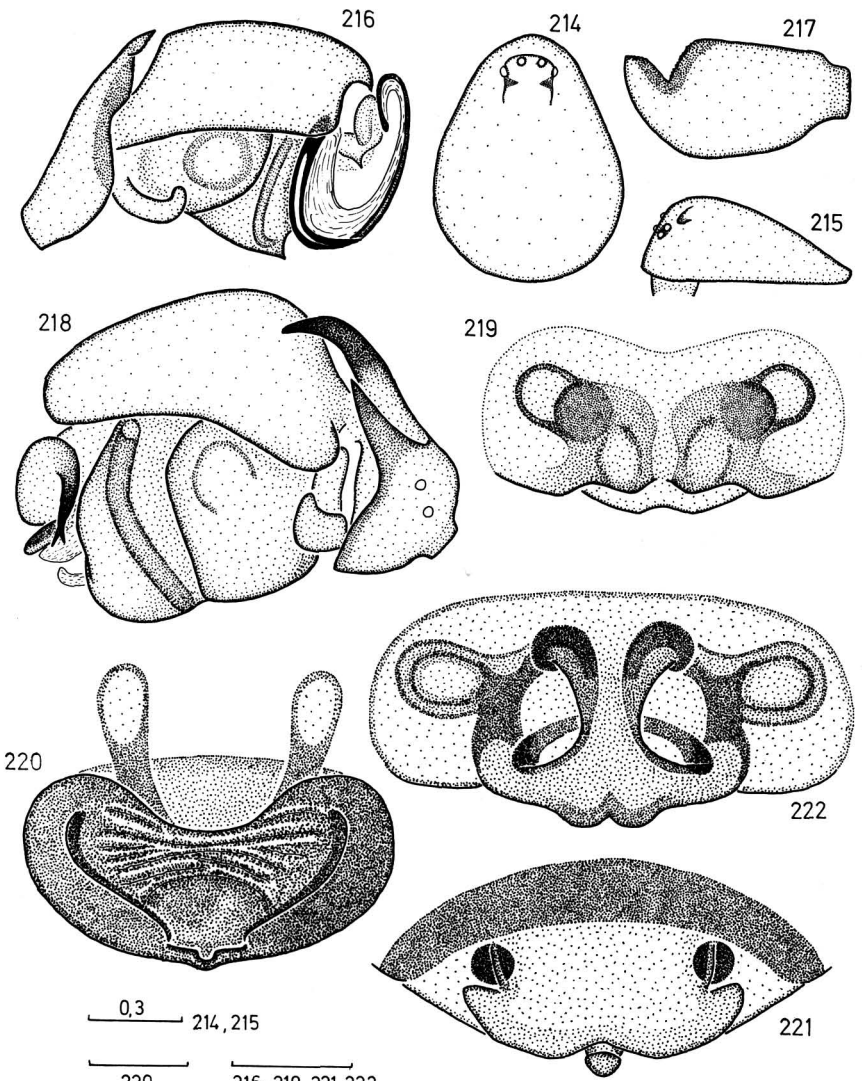
Remarks: This widespread species has been registered within Middle Asia only from the W-Tien-Shang Mts., Fergansky Mt. Ridge (Zonstein 1984: sub. *W. melanocephala* O. Pickard-Cambridge 1881).

Walckenaeria (Prosopotheca) monoceros (Wider 1834).

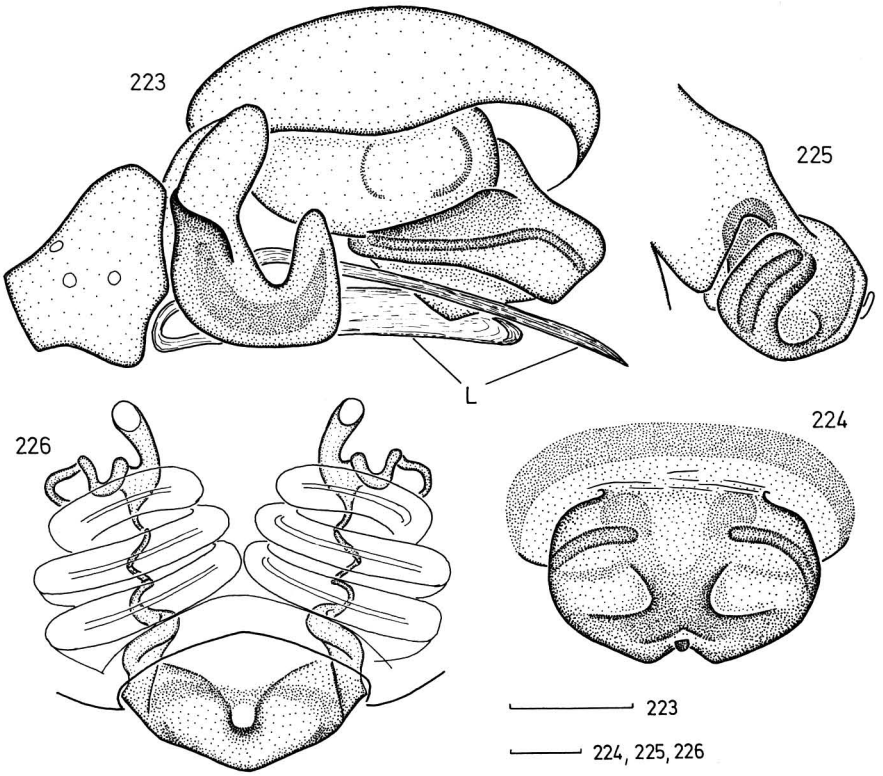
1986 *Walckenaeria monoceros*, — Tanasevitch & Fet, Izv. Akad. nauk Turkmen. SSR, Biol., **1986** (1): 41.

Material: 1♀ (ZMMU), USSR, Turkmenia, W-Kopetdagh Mt. Ridge, Aidere Valley [54], 700-800 m, 4.-8.VI.1982; leg. N.U. — 1♀ (ZMMU), Kirghizia, N-Tien-Shang Mts., Frunze Area, Kirghizsky Mt. Ridge, Tyuya-Ashu Valley [10], 3000-3400 m, 6.-8.VIII.1984; leg. S.Z. — 1♀ (ZMMU), Uzbekistan, W-Tien-Shang Mts., Namangan Area, Kuraminsky Mt. Ridge, Kamchik Pass [39], 2300 m, 10.IV.1985; leg. S.O.

Remarks: In Middle Asia, this species has hitherto been known only from W-Kopetdagh, Turkmenia (Tanasevitch & Fet 1986).



Figs. 214-222. *Panamomops pamiricus* n. sp., ♂ holotype (214-217); *Walckenaeria wunderlichi*, ♂ ♀ from Ugamsky Mt. Ridge (218-219); *Erigone sinensis*, ♀ holotype from Kansu, China (220); *Lepthyphantes erigonoides*, ♀ holotype from Kansu, China (221); *Oinia griseolineata*, ♀ holotype from Kansu, China (222). — 214-215) ♂, carapace; 216) ♂, right palp; 217) ♂, palpal tibia, dorsal view; 218) ♂, left palp; 219-222) ♀, epigyne, ventral view.



Figs. 223-226. *Lepthyphantes cultellifer,* ♂ holotype from Kansu, China (223); *hummeli,* ♀ holotype from Kansu, China (224-225); *Linyphia triangularoides,* ♀ holotype from Kansu, China. — 223) ♂, right palp; 224-225) ♀, epigyne, ventral and lateral views, respect.; 226) ♀, vulva.

Walckenaeria (Wideria) wunderlichi Tanasevitch 1983.

Figs. 218-219.

1983 *Walckenaeria wunderlichi* Tanasevitch, Zool. Zh., **62** (12): 1793; figs. (♂ ♀).

Material: 1♀ (ZMMU), USSR, Uzbekistan, W-Tien-Shang Mts., Namangan Area, Kuraminsky Mt. Ridge, near Beshkul [40], 12.IV.1985; leg. S.O. — 1♂ (SMF 34886), Tashkent Area, Ugamsky Mt. Ridge, near Sidjak [37], Kainar-Sai Valley, 1800 m, *Juniperus* sparse forest, under stones on slope, IV.1982; leg. A.T.

Remarks: This species has recently been described from the W-Tien-Shang Mts. (Ugamsky Mt. Ridge: Tanasevitch 1983).

All in all, the linyphiid fauna of Middle Asia comprises now 129 species. Certainly, this figure does not reflect the entire richness and diversity of the fauna, but seems to be not too far from reality. The material at hand still contains about

a dozen forms that turned out to be unidentifiable (♀♀) due to the absence of ♂♂. Part of them may represent ♀♀ of the species known at the moment only by the ♂ sex, several others perhaps belong to new species.

It is noteworthy that the territory of Middle Asia has been covered by sufficient collecting very irregularly; from the mountainous regions undoubtedly harbouring the main bulk of the species variety, only the Tien-Shang and Kopetdagh Mts. can boast to have become fairly well-known as regards the linyphiid fauna. Unfortunately, data on Linyphiidae from the huge areas of Pamir-Alai and Djungarsky-Alatau are scanty, while the Pamir Upland is still a real "terra incognita" in this respect. However, I dare predict that a great contribution to the Middle Asian fauna due to Pamir can hardly be expected, because this region is known to be too xeromorphic.

A chorological analysis.

The present paper, as has been pointed out, deals with the territory of Soviet Middle Asia only. Of course, from a biogeographical viewpoint, such a region is highly artificial. That is why, in order to attempt a zoogeographical analysis of the Middle Asian linyphiid fauna, I must cope also with the up-to-date faunas of the areas lying south of Soviet Middle Asia, i.e. the mountain systems of Khorasan (NE-Iran), Paropamisus (NW-Afghanistan), Hindu Kush (N-Afghanistan and N-Pakistan), and Chinese Tien-Shang. Then Middle Asia (s. lato) becomes a natural zoogeographical region delimited by the deserts of C-Iran and C-Afghanistan, and the high chains of the Himalayas from the south, as well as by the deserts of Kashgaria and Djungaria (NW-China) from the east (s. KRYZHANOVSKY 1965).

The linyphiid fauna of the Middle Asian areas (s. lato) lying outside the USSR is very poorly explored. As far as I know, in the southeastern regions (Chinese Tien-Shang) no Linyphiidae have hitherto been reported, and in the southern only eleven forms:

Centromerita bicolor (BLACKWALL 1833): Qalat, Pol-Khomri (Afghanistan) (ROEWER 1962);

Lepthyphantes afghanus DENIS 1958: Paropamisus (DENIS 1958);

L. hindukuschensis MILLER & BUCHAR 1972: Hindu Kush (Pakistan) (MILLER & BUCHAR 1972);

L. nebulosus (SUNDEVALL 1830): Khorasan (ROEWER 1955), Hindu Kush, Paropamisus, Qalat (Afghanistan) (ROEWER 1962);

L. tenuis (BLACKWALL 1852): Hindu Kush (Afghanistan) (DENIS 1958);

Porrhomma microphthalmum (O. PICKARD-CAMBRIDGE 1871) : Hindu Kush, Paropamisus (Afghanistan) (ROEWER 1962);

Arachosinella strepens DENIS 1958: Hindu Kush (Afghanistan) (DENIS 1958);

Erigone atra BLACKWALL 1833: Hindu Kush (Afghanistan) (DENIS 1958, ROEWER 1962);

E. vagans SAVIGNY & AUDOUIN 1825: cotton fields in N-Afghanistan (ANDREEVA & TYSHCHENKO 1970; ANDREEVA 1975, 1976);

Oedothorax apicatus (BLACKWALL 1850): Hindu Kush, Paropamisus (Afghanistan) (ROEWER 1962);

O. retusus (WESTRING 1851): Hindu Kush, Kabul, Pol-Khomri (Afghanistan) (ROEWER 1962).

Tab. 1. Zoogeographical composition of the Middle Asian linyphiid fauna. Some unpublished data have been used, kindly given to me by Dr. K. Eskov, on the distribution pattern of Siberian and Far Eastern linyphiids.

Pattern of distribution	Abbreviations	Number of species	Percentage
1. Holarctic	H	8	6.2
2. Palaearctic	P	22	17.0
3. Euro-Siberian	ES	8	6.2
4. Euro-Ancient Mediterranean	EAM	14	10.9
5. Siberian	S	2	1.6
6. Ancient Mediterranean	AM	7	5.4
7. Central Ancient Mediterranean	CAM	1	0.8
8. Central Asian	CA	3	2.3
9. Middle Asian Endemics	MA	64	49.6
Total:		129	100.0%

Unfortunately, this material could not be rechecked, but I am sure that some of these species were wrongly identified. Thus, *L. nebulosus* is absent from Middle Asia, being substituted here by its vicariant *L. nebulosoides* Wunderlich 1977. The record of the typical forest-dweller *C. bicolor* widespread in the temperate zone of Europe seems dubious, as it concerns the central, arid regions of Afghanistan. For the same reasons, the discoveries of both *P. microphthalmum* and *O. retusus* are highly problematic.

Tab. 1 shows the proportion of different zoogeographical groups in the Middle Asian linyphiid fauna. Several patterns warrant special comments. Besides the typical Siberian *Mecynargus tungusicus* (Eskov 1981), group S conventionally comprises also *Allomengea dentisetis* (Grube 1861) spread over S-Siberia, Mongolia, the USSR Far East, and Kamchatka. Group CAM consists only of *Lepthyphantes spasskyi* Tanasevitch 1986 known to inhabit the steppe of the southern part of the USSR European territory and W-Kazakhstan. Group MA includes only the species restricted to Middle Asia, the majority of them being doubtless endemics. Groups CA includes *Stemonyphantes griseus* (Schenkel 1937) and *Erigone amdoensis* Schenkel 1963 which, besides Tien-Shang, are also known from C-Asia, as well as *nebulosoides* Wunderlich 1977 widespread not only in Middle Asia, but also reported from the Himalayas. The other patterns are used in the common sense (Tab. 2).

The following peculiarities of the Middle Asian linyphiid fauna can immediately be seen from Tab. 1: a) a high percentage of widespread species — 40·3% (H + P + ES + EAM); b) a high percentage of regional endemics — 49·6% (MA), and c) an unimportant percentage of both Ancient Mediterranean elements — 6·2%

(AM + CAM) and Central Asian ones — 2·3% (CA). To explain the above situation, one needs to remember certain events in regard to regional paleogeography and the history of the Middle Asian flora, with which Linyphiidae are known to be so closely associated.

According to KRYZHANOVSKY (1965) and GVOZDETSKY & MIKHAILOV (1978), in the Paleogene the territory of modern Middle Asia is known to have been divided into two distinct orographic parts: a lower western and a higher eastern one. The general hypsometric level was, however, much lower than nowadays. The plains were the bottom of the Tethys Sea, the higher patches were archipelagos.

At the end of the Oligocene — beginning of the Miocene two types of flora existed within this region, both divided by the sea. In the north of present Middle Asia, as well as in Kazakhstan and SW-Siberia, a "Turgai flora" (sensu lato, s. ZHILIN 1984) dominated. This mesophilous subtropical flora witnesses of a humid and warm temperate climate.

Vegetation of the southern coast of the Tethys Sea was, however, quite different: the territories of modern Iran and Turkmenia were dominated by a more xerophytous flora. The climate was drier, with uneven precipitation rates from season to season.

The Alpine orogenesis since the Oligocene has led to a gradual regress of the Tethys Sea, and the newly formed areas, mainly plains, are known to have been colonized by a vegetation of savannoid and steppe type which, in the course of time, attained more and more xerophytous features.

The Neogene is known to have caused very significant orographic changes in the territory of modern Middle Asia. The mountainous parts of the region, in particular Tien-Shang, Pamir-Alai, Pamir, underwent a pronounced elevation to become, till the end of the Pliocene, a typical mountainous land, with its hypsometrical level being only a little lower than at the present.

Central Asia also underwent a great orogenic elevation during the Neogene. The gigantic chains of the Himalayas and Hindu Kush rose so much that, together with the risen Elburs, Khorasan and Paropamisus Mts., they have become a barrier for humid monsoons' penetration from the south, while the chains in the east and north-east have become hindering penetration in Middle Asia of the dry and cold air masses of the Sibero-Mongolian anticyclone. All this has led to an increased continentality of the regional climate and formed the conditions favourable for development of desert landscapes. The plains have become covered with desert types of vegetation, whereas the slopes favourably exposed to relatively humid air masses supported broadleaved forests which, along with the increasing climatic aridization, gradually reduced their ranges, preserved nowadays only fragmentarily, but not as a single altitudinal belt of vegetation.

The increased differentiation of the desert and mountainous floras has led to the formation of altitudinal zonality. The establishment of the great origin centers of both desert and mountainous biotas of Middle Asia is thus justly ascribed to the Pliocene, when a great number of autochthonous endemics of various rank are believed to have been formed.

In the Pleistocene, the mountainous parts of Middle Asia continued to rise, with the result that both Tien-Shang and Pamir-Alai rose by almost one kilometer and became capped with glaciers. The modern Middle Asian biota is assumed to have been formed then. During glaciations, periglacial communities ousted the boreal

Tab. 2. Chorology of the Middle Asian Linyphiidae.

Taxa	Pattern of distribution as in Tab. 1	Main geomorphological systems				Altitudinal belts of Tien-Shang					
									Higher mountainous belt		
		Turan Lowland + Badhkyz	Kopetdagh	Pamir-Alai + Pamir	Tien-Shang (N — Northern, W — Western, C — Central, I — Inner)	Lowland and piedmont belts 0-600 m	Lower mountainous belt 600-1200 m	Middle mountainous belt 1200-2000 m	Subalpic subbelt 2000-2800 m	Alpic subbelt 2800-3200 m	(Sub)nival subbelt > 3200 m
a	b	c	d	e	f	g	h	i	k	l	m
Linyphiinae											
1. *Agyneta cauta*	ES				W			+			
2. *A. fuscipalpis*	EAM	+	+	+	N, W	+	+	+	+		
3. *A. kopetdaghensis*	MA		+								
4. *A. ressli*	AM		+								
5. *A. rurestris*	P		+								
6. *A. subnivalis*	MA			+	N, I					+	+
7. *A. tianschanica*	MA				W				+		+
8. *A. uzbekistanica*	MA				W, I			+			+
9. *Allomengea dentisetis*	S				N				+		
10. *A. scopigera*	H				N				+		
11. *Bolyphantes alticeps*	ES				N			+	+		
12. *B. indexoides*	MA			+	W, N		+	+	+		+
13. *B. severtzovi*	MA				N		+	+			
14. *Centromerus expertus*	ES				N			+			
15. *Drapetisca socialis*	P				N				+		
16. *Frontinellina frutetorum*	EAM		+								
17. *Helophora insignis*	H				W			+			
18. *Lepthyphantes altus*	MA			+	N		+	+	+	+	+
19. *L. badhkyzensis*	MA	+									
20. *L. bipartitus*	MA				N				+		
21. *L. cinereus*	MA				N			+	+		
22. *L. cruciformis*	MA				N				+		
23. *L. escapus*	MA			+							
24. *L. hissaricus*	MA			+							
25. *L. kronebergi*	MA	+		+	N, W	+	+	+			
26. *L. kuhitangensis*	MA			+							
27. *L. macer*	MA				W			+			
28. *L. mengei*	P				N			+	+		
29. *L. nebulosoides*	CA		+	+	W		+	+			
30. *L. ovtchinnikovi*	MA				N				+		

Fortsetzung Tab. 2

a	b	c	d	e	f	g	h	i	k	l	m
31. *L. palaeformis*	MA				N			+	+		
32. *L. pamiricus*	MA			+							
33. *L. perfidus*	MA				W			+			
34. *L. pinicola*	EAM		+								
35. *L. plumatus*	MA				N, W		+	+	+		
36. *L. potanini*	MA				N				+		
37. *L. rupeus*	MA				N		+				
38. *L. sacer*	MA				N, C					+	+
39. *L. solivagus*	MA				N				+		
40. *L. spasskyi*	CAM	+									
41. *L. subtilis*	MA				N		+	+			
42. *L. supremus*	MA				C						+
43. *L. tchatkalensis*	MA				N, W		+	+	+		
44. *L. tenuis*	H		+	+	N, W	+	+	+	+		
45. *L. tienschangensis*	MA				N			+	+		
46. *L. turanicus*	MA	+	+	+							
47. *L. turkestanicus*	MA	+									
48. *L. ultimus*	MA			+							
49. *L. uzbekistanicus*	MA			+	W		+	+			
50. *L. vaginatus*	MA			+	N, W		+	+	+	+	
51. *L. vittatus*	MA			+	W			+	+		
52. *L. zonsteini*	MA				W			+			
53. *Linyphia hortensis*	P	+		+	N, W	+	+	+			
54. *Microlinyphia pusilla*	H	+	+	+	N, W	+	+	+			
55. *Microneta viaria*	P				N, W			+			
56. *Neriene clathrata*	H				N, W	+	+	+	+		
57. *Poeciloneta variegata*	P				N, W		+	+			
58. *Porrhomma pygmaeum*	P			+	W			+			
59. *Stemonyphantes curvipes*	MA				N				+		
60. *S. griseus*	CA				N, C				+	+	
61. *S. grossus*	MA				W			+	+		
62. *S. lineatus*	P			+	N, W		+	+			
63. *Troglohyphantes molestus*	MA				N, C				+	+	+
Erigoninae											
64. *Acartauchenius scurillis*	EAM				N, W		+	+			
65. *Alioranus avanturus*	MA			+	N, I			+	+		
66. *A. planiceps*	AM			+							
67. *Arachosinella strepens*	MA				N				+		
68. *Archaraeoncus prospiciens*	AM				N	+	+				
69. *Asthenargus edentulus*	MA				N			+	+		
70. *Caviphantes dobrogica*	AM				N		+				
71. *Ceratinella brevis*	P				N, W		+	+	+		
72. *C. wideri*	EAM				W			+			
73. *Ceratinopsis romana*	P	+		+	W			+			
74. *Collinsia tianschanica*	MA				N					+	
75. *Dactylopisthes locketi*	MA				W			+			
76. *D. mirabilis*	MA				N			+			
77. *Dicymbium nigrum*	P				N, W			+	+		

Fortsetzung Tab. 2

Taxa	Pattern of distribution as in Tab. 1	Main geomorphological systems				Altitudinal belts of Tien-Shang					
									Higher mountainous belt		
		Turan Lowland + Badhkyz	Kopetdagh	Pamir-Alai + Pamir	Tien-Shang (N — Northern, W — Western, C — Central, I — Inner)	Lowland and piedmont belts 0-600 m	Lower mountainous belt 600-1200 m	Middle mountainous belt 1200-2000 m	Subalpic subbelt 2000-2800 m	Alpic subbelt 2800-3200 m	(Sub)nival subbelt > 3200 m
a	b	c	d	e	f	g	h	i	k	l	m
78. *Diplocephalus bifurcatus*	MA		+								
79. *D. montanus*	MA			+	W						+
80. *Donacochara speciosa*	P	+			N, W		+	+			
81. *Entelecara acuminata*	P				N		+	+			
82. *Erigone amdoensis*	CA				C					+	
83. *E. atra*	P	+		+	N, C	+	+	+	+	+	
84. *E. dentipalpis*	P	+	+	+	N, W	+	+	+	+	+	+
85. *E. remota*	EAM				C						+
86. *E. vagans*	EAM	+	+	+	N, W	+	+	+			
87. *Erigonoplus kirghizicus*	MA				N		+				
88. *E. ninae*	MA		+								
89. *Gnathonarium dentatum*	P			+	N, W		+	+	+	+	
90. *Gonatium rubens*	P				N			+			
91. *Gongilidiellum murcidum*	EAM		+								
92. *Hilaira frigida montigena*	EAM				N				+		
93. *Janetschekia necessaria*	MA	+			W			+			
94. *Lasiargus hirsutus*	ES				N				+		
95. *Maso sundevalli*	H				W, I			+	+		
96. *Mecopisthes orientalis*	MA		+								
97. *Mecynargus asiaticus*	MA				N				+		
98. *M. tungusicus*	S				N				+		
99. *Mesasigone mira*	MA			+	N, W		+	+	+		
100. *Metopobactrus prominulus*	EAM				N				+		
101. *Micrargus subaequalis*	EAM				N			+			
102. *Microctenonyx subitaneus*	EAM	+	+		W			+			
103. *Milleriana inerrans*	P				N, I		+	+	+		
104. *Minicia kirghizica*	MA				N			+	+		
105. *M. marginella*	ES				N				+		

Fortsetzung Tab. 2

a	b	c	d	e	f	g	h	i	k	l	m
106. *Minyrioloides trifrons*	ES				N				+		
107. *Oedothorax apicatus*	P	+	+	+	N, W	+	+	+	+		
108. *O. meridionalis*	AM				I				+		
109. *Panamonops pamiricus*	MA			+							
110. *Pelecopsis laptevi*	MA	+									
111. *P. parallela*	P				N, W		+	+			
112. *P. paralleloides*	MA		+								
113. *Pocadicnemis pumila*	H				N			+			
114. *Scotargus pilosus*	EAM			+	N, W			+	+		
115. *Scotinotylus alpigenus*	ES				N			+			
116. *S. tianschanicus*	MA				N			+	+		
117. *Silometopus incurvatus*	ES			+	W			+			
118. *Tapinocyba spoliatrix*	MA				W			+			
119. *Tibioplus tachygynoides*	MA				N				+	+	
120. *Tiso aestivus*	P				N				+		
121. *Trachelocamptus asiaticus*	MA	+									
122. *T. monoceros*	MA				W			+			
123. *Trichoncoides piscator*	AM		+	+	N	+	+				
124. *Trichopterna grummi*	MA				N			+	+		
125. *Typhochrestus inflatus*	AM				N, W			+	+		
126. *Walckenaeria antica*	P				N, W			+			
127. *W. atrotibialis*	H				W			+			
128. *W. monoceros*	EAM		+		N, W				+		+
129. *W. wunderlichi*	MA				W			+			
Total species:		18	21	34	106	12	34	70	55	12	12

vegetation far to the south and, using the mountain systems of S-Siberia as stepping stones, it also penetrated mountainous Middle Asia. There and then, expanding high-altitude glaciers caused a downward shift and/or disruption of altitudinal belts, thus enabling a thorough exchange of both flora and fauna elements between different belts and isolated mountain systems. Penetration of *Picea* forests in Tien-Shang, as well as the formation of alpine landscapes are soundly believed of reflect those events.

As regards the lower, plain parts of Middle Asia, they are known to have supported landscapes very similar to the modern ones since as far back as the late Pliocene, with predominance of desert and semi-desert formations harbouring a peculiar flora, and banks of lakes and rivers were covered with bush thickets.

Since the most ancient type of (mesophytous) vegetation in Middle Asia is known to be represented nowadays by *Juglans-Prunus-Pyrus* etc. mixed forests, i.e. derivatives of the Tertiary "Turgai flora", the initial Tertiary kernel of the present linyphiid fauna must be sought for there. Fortunately, taking into account Zonstein's (1984) and my own data, the fauna of such forests is now fairly well-known. Zonstein (1984) referred three species of relatively poorly vagile spiders to this

Tertiary kernel: *Brachythele virgata* SIMON 1891 (Mygalomorphae), *Dysdera arnoldii* CHARITONOV 1956 (Dysderidae), and *Coelotus juglandicola* OVTSCHINNIKOV 1984 (Agelenidae). The first two are relicts restricted to the remains of Tertiary broadleaved forests and displaying at the present disjunct S-Palaearctic patterns. The third species seems to be an obligatory component of the broadleaved forest cenoses of Tien-Shang. As regards linyphiids, none of the 40 forms populating Middle Asian deciduous forests can be attributed to such elements: they are all either widespread or regional endemics inhabiting other types of vegetation as well. In other words, so far as known at the moment, the ancient Tertiary kernel seems to be untraceable in the modern Middle Asian linyphiid fauna. It is doubtless that Linyphiidae inhabited the ancient Tertiary "Turgai forests" of Middle Asia, but they seem to have failed to preserve such specific elements till nowadays, probably due to extinction or adaptations to other habitats.

Practically all the authors who more or less seriously dealt with the Middle Asian fauna noted its pronounced endemism involving not only (sub)species, but also numerous (sub)genera. KRYZHANOVSKY (1965), summarizing data on different Middle Asian insect groups, states that the species endemism reaches in general a level of over ⅔rds, being over 80% in, e.g., Tenebrionidae (Coleoptera), Catantopinae (Orthoptera), and even 100% in, e.g., Gomphomastacinae (Orthoptera). The linyphiid spiders are no exception in this respect. In spite of the fact that they generally represent a highly vagile group, the level of endemism reaches 50%.

Several important conclusions may be drawn when analyzing this figure. First of all, almost all the Middle Asian endemics are confined to mountains, in particular to middle- and high-mountain landscapes. Perhaps the only endemic restricted to riverine bush thickets of the Turan Lowland is *Lepthyphantes turkestanicus* n. sp. Among the mountainous endemics, a group of species distinguishable by their boreal (mainly Siberian) origin is evident: *Bolyphantes indexoides* n. sp., *Lepthyphantes cruciformis* n. sp., *L. palaeformis* n. sp., *Arachosinella strepens* DENIS 1958, *Collinsia tianschanica* n. sp., *Scotinotylus tianschanicus* n. sp., *Tibioplus tachygynoides* n. sp., and *Mecynargus asiaticus* n. sp. These species inhabiting the high-mountain coniferous forests of N-Tien-Shang (perhaps except for *Bolyphantes indexoides* n. sp., which has moved to dwelling chiefly in broadleaved forests) seem to have penetrated Middle Asia together with the boreal vegetation during the Pleistocene glaciations and then transformed into distinct vicariants constituting such boreo-alpine disjunct pairs as *Bolyphantes indexoides* n. sp. — *Bolyphantes index* (THORELL 1856), *Lepthyphantes palaeformis* n. sp. — *Lepthyphantes nenilini* TANASEVITCH 1987, *Tibioplus tachygynoides* n. sp. — *Tibioplus diversus* (L. KOCH 1879), etc.

Another group of endemics displays obvious zoogeographical relationships with the Mediterranean. Such are representatives of the Ancient Mediterranean genera *Dactylopisthes* SIMON 1884 [*locketi* (TANASEVITCH 1983) and *mirabilis* (TANASEVITCH 1985), both closely related to the Mediterranean *digiticeps* SIMON 1884], *Trachelocamptus* SIMON 1884 [*asiaticus* n. sp. and *monoceros* n. sp., the latter displaying particularly close affinities with the N-African *mutabilis* DENIS 1966], *Alioranus* SIMON 1926 [*avanturus* ANDREEVA & TYSTSHENKO 1970, a close relative of the Mediterranean *pauper* (SIMON 1881)], and *Janetschekia* SCHENKEL 1939 [*necessaria* TANASEVITCH 1985, a form highly closely related to the Alpine *monodon* (O. PICKARD-CAMBRIDGE 1872)]. On the other hand, *Erigonoplus kirghizicus* n. sp.

seems to be more closely related to the E-Siberian *minaretifer* Eskov 1986 rather than to the (Ancient) Mediterranean congeners. It is noteworthy that none of the above species of this group reaches particularly high altitudes.

One more group, especially scanty, displays zoogeographical connection between Middle Asia and the Himalayas. Thus, *Lepthyphantes uzbekistanicus* Tanasevitch 1983 is represented by a separate subspecies in Kashmir and Nepal, *Minicia kirghizica* Tanasevitch 1985 is particularly closely related to *vittata* di Caporiacco 1934 from Karakorum, and *Asthenargus edentulus* n. sp. to the Nepalese *thaleri* Wunderlich 1983.

Taxonomically, nearly 50% of the Middle Asian endemic linyphiid species belong in the genus *Lepthyphantes* Menge 1866. The mountain systems of the S-Palaearctic, including those of Middle Asia, seem to have been a particularly favourable arena for speciation of this genus. In Middle Asia, a highly conspicuous fauna of *Lepthyphantes* has been evolved: out of its 35 constituent species, only five [*mengei* Kulczyński 1887, *pinicola* Simon 1884, *nebulosoides* Wunderlich 1977, *tenuis* (Blackwall 1852), and *spasskyi* Tanasevitch 1986] occur elsewhere.

The terrestrial fauna of Middle Asia, as it has already been mentioned above, is known to comprise a lot of endemic (sub)genera as well. For instance, the local generic endemism in Carabidae (Coleoptera) reaches a level of 15·7%, that of Cerambycidae (Coleoptera) is 12·5%, that of Tenebrionidae (Coleoptera) is 26·1%, that of Scarabaeoidea is 26·8% (Kryzhanovsky 1965). As regards Linyphiidae, only 3·2% of the Middle Asian genera are endemic. I consider as such only the monotypical *Arachosinella* Denis 1958 and *Mesasigone* n. gen. Denis (1958) regarded his *Arachosinella* as particularly closely related to *Donacochara* Thorell 1875, but I am rather inclined to see its closest affinities with the Palaearctic monotypical boreal genus *Leptorhoptrum* Kulczyński 1894. The discovery of *Arachosinella strepens* Denis 1958 in the high-mountain *Picea* stands of N-Tien-Shang permits to propose its boreal (Siberian) origin and to date its penetration into Middle Asia as far back as the Pleistocene, when it might have even reached Hindu Kush, its terra typica. As regards *Mesasigone* n. gen., its relationships are still obscure.

The second abundant group of Middle Asian Linyphiidae following endemics is composed of widespread species (H + P + ES + EAM) — 40·3%. Like certain Siberian elements [*Mecynargus tungusicus* (Eskov 1981) and *Allomengea dentisetis* (Grube 1861)], the majority of the widespread forms are only Quaternary invaders, a siege of which from the north occupied Middle Asia during Pleistocene. Nowadays such species are mainly met with in the middle- to high-mountain belts. The subsequent retreat of the boreal vegetation and isolation of the Middle Asian mountain system by the peripheral xeromorphic areas have led to the formation of disjunctions and of new isolates. The Arcto-alpine disjunction in *Erigone remota* L. Koch 1869, the boreo-alpine ones in *Mecynargus tungusicus* (Eskov 1981) and *Scotinotylus alpigenus* (L. Koch 1869), etc., seem to be sufficient as examples.

Ancient Mediterranean forms known to be typical elements in the faunal composition of all more or less poorly vagile groups in Middle Asia (s. Kryzhanovsky 1965), are highly inconspicuous among Middle Asian linyphiids — only 5·4% (AM + CAM). They are *Agyneta ressli* (Wunderlich 1973), *Alioranus planiceps* (Wunderlich 1980), *Archaraeoncus prospiciens* (Thorell 1875), *Caviphantes dobrogica* (Dumitrescu & Miller 1962), *Trichoncoides piscator* (Simon 1884),

Typhochrestus inflatus THALER 1980 and *Oedothorax meridionalis* TANASEVITCH 1987. Interestingly, almost all of them populate the lowland and/or piedmont belts, whereas only the latter species occurs rather high (at an altitude of 2000 m) in the mountains of Middle Asia, as well as in the piedmont to middle-mountain belts of the Caucasus (TANASEVITCH 1987a). The low number of Ancient Mediterranean elements in the Middle Asian linyphiid fauna can perhaps be accounted for speciation and transformation of quite numerous Ancient Mediterranean taxa into endemics (s. above).

Another poorly represented group in the linyphiid fauna of Middle Asia demonstrates certain zoogeographical connections between Middle and Central Asia. They are *Stemonyphantes griseus* (SCHENKEL 1937) and *Erigone amdoensis* SCHENKEL 1937, known, besides Tien-Shang, in the Nan-Shang Mts. (?), Kansu Prov., China, as well as *Lepthyphantes nebulosoides* WUNDERLICH 1977 widespread not only in Middle Asia, but also reported from the Himalayas (TANASEVITCH 1987b). Such feeble affinities with the fauna of the mountains of Central Asia seem inexplicable merely by deficiency in the present knowledge of the linyphiid faunas in question.

The distribution of the Middle Asian Linyphiidae in the main geomorphological systems and altitudinal belts has been presented in Tab. 2. Delimitation of single altitudinal belts throughout the entire region of Middle Asia is certainly impossible (s. above), therefore I have followed the generally accepted system of altitudinal zonality of Tien-Shang (GVOZDETSKY & MIKHAILOV 1978, KRYZHANOVSKY 1965, etc.), an area particularly well-investigated in respect to linyphiids. Perhaps it is to be noted that as a border between the middle and higher mountainous belts I have accepted the upper line of broadleaved forests, while as a demarcation between the subalpic and alpic subbelts I have used the upper timberline of *Picea* stands.

Tab. 2 distinctly shows that the majority of the constituent species are restricted to the middle and/or higher mountainous belts. Forms discovered in the Turan Lowland are very few, and there they are usually restricted to riverine bush thickets or small swamps [*Lepthyphantes turkestanicus* n. sp., *Janetschekia necessaria* TANASEVITCH 1985, *Oedothorax apicatus* (BLACKWALL 1850), etc.], to rodent burrows (*Lepthyphantes turanicus* TANASEVITCH & FET 1986), cracks in soil or rock, niches and/or other shelters offerring survival. For instance, field explorations in the Badhkyz State Reserve, SE-Turkmenia, have revealed that in spring the population density of several linyphiids [e.g., *Lepthyphantes turanicus* TANASEVITCH & FET 1986, *Donacochara speciosa* (THORELL 1875), *Pelecopsis laptevi* TANASEVITCH & FET 1986, etc.] is high even in the open areas during the period of active ephemeral and ephemeroid vegetation (s. OVTSHARENKO & FET 1980, KRIVOKHATSKY & FET 1981).

Tab. 3 shows that the middle mountainous belt is particularly rich in linyphiids (70 species, i.e. 68%), followed by the higher mountainous belt (63 species, i.e. 60%). The faunas of both lower mountainous belt and lowlands + piedmonts are much poorer — 34 (32%) and 12 (11%), respectively. The share of endemics in the row lowlands + piedmonts — lower mountainous belt — middle mountainous belt — higher mountainous belt steadily grows, constituting ~~1%, 11%, 28%, and 31%,~~ 8 35 43 52 respectively, and beginning with the middle mountainous belt this element turns out to be dominating.

Tab. 3. Relations between zoogeographical elements in the Tien-Shang altitudinal belts (total 106 species).

Zoogeographical groups as in Tab. 1	Number of species			
	Lowland and piedmont belts 0-600 m	Lower mountainous belt 600-1200 m	Middle mountainous belt 1200-2000 m	Higher mountainous belt > 2000 m
H	3	3	7	4
P	4	12	19	10
ES	—	—	5	4
EAM	2	3	7	6
S	—	—	—	2
AM	2	3	1	2
CAM	—	—	—	—
CA	—	1	1	2
MA	1	12	30	33
Total	12	~~35~~ 34	~~69~~ 70	63
% endemics	~~0.9~~%	~~11.3~~%	~~28.3~~%	~~31.1~~%
	8,3	35,3	42,9	52,4

Some zoogeographical groups appear to be more or less strictly confined to a certain altitudinal belt, e.g., the Siberian elements to the higher belt, the Euro-Siberian and C-Asian ones to the middle and/or higher mountainous belts. Certain chorological groups seem to be characteristic of vegetation. Thus, a number of boreal species, e.g., *Allomengea dentisetis* (GRUBE 1861), *A. scopigera* (GRUBE 1859), *Bolyphantes alticeps* (SUNDEWALL 1832), *Centromerus expertus* (O. PICKARD-CAMBRIDGE 1871), *Lasiargus hirsutus* (MENGE 1869), *Mecynargus tungusicus* (ESKOV 1981) and *Scotinotylus alpigenus* (L. KOCH 1869), are restricted to *Picea* forests, the latters being also a concentration site for a good lot of endemics of boreal origin (e.g., *Lepthyphantes cruciformis* n. sp., *L. palaeformis* n. sp., *Arachosinella strepens* DENIS 1958, *Collinsia tianschanica* n. sp., *Scotinotylus tianschanicus* n. sp., *Tibioplus tachygynoides* n. sp. and *Mecynargus asiaticus* n. sp.). The fauna of broadleaved forests is also very rich, but appears to be extremely uncharacteristic, being absolutely devoid of conspicuous linyphiid elements.

In conclusion, several general observations seem particularly important. The linyphiid fauna of Middle Asia has turned out to be very rich and highly characteristic, displaying: 1) a high-level endemism (50%), 2) a high-degree commonness (40% due to widespread forms), and 3) a very poor representation of An-

cient Mediterranean (6%) and Central Asian elements (2%). The great endemic kernel is certainly heterogenous, its Mediterranean and boreal (Siberian) roots are evident. Part of the endemics seem to be derivatives of Tertiary elements, but nowadays such Tertiary relicts are untraceable. The large proportion of widespread linyphiids, as well as the pronounced number of Siberian invaders in the present Middle Asian fauna undoubtedly witnesses the fact that, besides autochthonous speciation, the fauna has gained a lot due to migrations caused by the Pleistocene glaciations. Besides, quite poor affinities between the faunas of Middle and Central Asia are indicative of independent development and establishment of these two major diversification centers of Palaearctic Linyphiidae. Such data in general substantiate traditional ideas (SEMENOV-TIAN-SHANSKY 1936, KRYZHANOVSKY 1965, LOPATIN 1969, etc.) about Middle Asia as an independent and very considerable faunogenetical center in the Palaearctic, as well as ANDREEVA's (1976) zoogeographical analysis of the Middle Asian spider fauna.

The above chorological analysis is certainly far from final and must be understood just as the first attempt to summarize present knowledge of the Linyphiidae of Middle Asia. In the course of future investigations many more addenda and even corrigenda may be expected to be made as further contributions to this highly interesting and important problem.

Appendix.

Based on the spider materials of both Dr. G. POTANIN's expedition in 1884—1886 and the Swedish-Chinese Expedition of Dr. SVEN HEDIN and Prof. SÜ PING-CHANG to China in 1927—1930, and some other collections, SCHENKEL (1937, 1953, 1963) described and recorded a number of Linyphiidae from Kansu Prov., China. This material, housed at the NRS and MNHN, has partly been revised by VAN HELSDINGEN (1969) and MILLIDGE (1981). Due to the courtesy of Dr. T. KRONESTEDT (NRS), and Dr. M. HUBERT (MNHN), I have also been privileged of re-examining certain linyphiid types from Central Asia in connection with the present revision of the Middle Asian fauna.

Following is a list of the revised Linyphiidae from Kansu (with new illustrations to some of them) to summarize the nomenclatorial changes introduced by VAN HELSDINGEN (1969), MILLIDGE (1981) and myself: the species marked with an asterisk have passed through my hands, those marked with two asterisks have been found in Middle Asia:

1. *Erigone amdoensis* SCHENKEL 1963**.
2. *Erigone kansuensis* SCHENKEL 1963* = *Erigone atra* BLACKWALL 1833 n. syn.
3. *Erigone sinensis* SCHENKEL 1937* (Fig. 220).
4. *Gonatium amdoensis* SCHENKEL 1937 = nomen dubium (MILLIDGE 1981: 259).
5. *Gonatium cinctum* SCHENKEL 1937 = *Gonatium japonicum* SIMON 1894 (MILLIDGE 1981: 257).
6. *Gonatium griseolineatum* SCHENKEL 1937* = *Oinia griseolineata* (SCHENKEL 1937) n. comb. (Fig. 222).
7. *Labulla grisea* SCHENKEL 1937*,** = *Stemonyphantes griseus* (SCHENKEL 1937) n. comb. (Figs. 99-100).

8. *Lepthyphantes cultellifer* SCHENKEL 1937* (Fig. 223).
9. *Lepthyphantes erigonoides* SCHENKEL 1937* (Fig. 221).
10. *Lepthyphantes hummeli* SCHENKEL 1937* (Figs. 224-225).
11. *Linyphia angulifera* SCHENKEL 1953 = *Neriene angulifera* (SCHENKEL 1953) (VAN HELSDINGEN 1969: 258).
12. *Linyphia fenestrata* SCHENKEL 1937 = *Neriene limbatinella* (BÖSENBERG & STRAND 1906) (VAN HELSDINGEN 1969: 278).
13. *Linyphia frutetorum* C. L. KOCH 1834 sensu SCHENKEL 1937 = *Neriene angulifera* (SCHENKEL 1953) (VAN HELSDINGEN 1969: 258).
14. *Linyphia marginata* C. L. KOCH 1834 sensu SCHENKEL (1937) = *Neriene longipedella* (BÖSENBERG & STRAND 1906) (VAN HELSDINGEN 1969: 235).
15. *Linyphia multidentata* SCHENKEL 1937* = *Neriene multidentata* (SCHENKEL 1937) (VAN HELSDINGEN 1969: 155).
16. *Linyphia peltata* WIDER 1834 (adults only) sensu SCHENKEL (1937) = *Neriene limbatinella* (BÖSENBERG & STRAND 1906) (VAN HELSDINGEN 1969: 279).
17. *Linyphia peltata* WIDER 1834 (juveniles only) sensu SCHENKEL (1937) = *Neriene angulifera* (SCHENKEL 1953) (VAN HELSDINGEN 1969: 258).
18. *Linyphia triangularoides* SCHENKEL 1937* (Fig. 226).

РЕЗЮМЕ.

Ревизия фауны пауков сем. Linyphiidae Средней Азии, основанная на обширных коллекциях и литературных данных. Из 129 видов, обнаруженных в регионе, 5 впервые отмечены для фауны СССР и 34 описаны как новые: *Agyneta kopetdaghensis, A. subnivalis, A. tianschanica, Bolyphantes indexoides, B. severtzovi, Lepthyphantes bipartitus, L. cruciformis, L. escapus, L. hissaricus, L. kronebergi, L. kuhitangensis, L. ovtchinnikovi, L. palaeformis, L. pamiricus, L. potanini, L. subtilis, L. turkestanicus, L. ultimus, L. zonsteini, Stemonyphantes curvipes, Troglohyphantes molestus, Asthenargus edentulus, Collinsia tianschanica, Diplocephalus bifurcatus, D. montanus, Erigonoplus kirghizicus, Mecynargus asiaticus, Panamomops pamiricus, Scotinotylus tianschanicus, Tibioplus tachygynoides, Trachelocamptus asiaticus, T. monoceros, Trichopterna grummi* n. spp., а также *Mesasigone mira* n. gen., n. sp. Установлена следующая синонимия и новые комбинации: *Conigerella* HOLM 1969 = *Mecynargus* KULCZYŃSKI 1894, *Hubertinus* WUNDERLICH 1980 = *Alioranus* SIMON 1926, *Erigone kansuensis* SCHENKEL 1963 = *Erigone atra* BLACKWALL 1833, *Stemonyphantes volucer* TANASEVITCH 1985 = *Stemonyphantes griseus* (SCHENKEL 1937) (новая комбинация из *Labulla*) n. syn.; *Tapinocyba locketi* TANASEVITCH 1983 = *Dactylopisthes locketi* (TANASEVITCH 1983), *Scytiella mirabilis* TANASEVITCH 1985 = *Dactylopisthes mirabilis* (TANASEVITCH 1985), *Gonatium griseolineatum* SCHENKEL 1937 = *Oinia griseolineata* (SCHENKEL 1937) n. comb. В целом, фауна линифиид Средней Азии содержит 50% региональных эндемиков, 40% широкоареальных, 6% древнесредиземноморских и 2% центральноазиатских форм. Для каждого вида указаны места находок, распределение по высотным поясам и тип ареала.

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