

Spiders (Aranei) of Middle Siberia, an updated check-list with a special reference to the Mirnoye Field Station

Пауки (Aranei) Средней Сибири, обновлённый список, особенно по стационару Мирное

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КЛЮЧЕВЫЕ СЛОВА: пауки, фанистические находки, Средняя Сибирь, новый вид, *Micaria*.

ABSTRACT: Altogether 496 species are listed from Middle Siberia and 283 from the Mirnoye Field Station. Records of species new to these areas are presented; 39 species are reported for the first time in Middle Siberia, *Porrhomma campbelli* F.O. Pickard-Cambridge, 1894 is new to Asia and Russia. *Micaria yeniseica* Marusik & Koponen sp.n. (♂) (closely related to *M. silesiaca* L. Koch, 1875) is described and diagnostic figures of the palp given for *Pardosa masurae* Esyunin & Efimik, 1998. Fourteen species are excluded from the previous list. The structure and special features of the fauna of Middle Siberia and that of the Mirnoye Field Station are compared with other northern faunas.

РЕЗЮМЕ: 496 видов отмечены в Средней Сибири и 283 из них в окрестностях стационара "Мирное". 39 видов впервые отмечены в Средней Сибири, а *Porrhomma campbelli* F.O. Pickard-Cambridge, 1894 является видом новым для фауны России и Азии. Описан новый вид *Micaria yeniseica* Marusik & Koponen sp.n. (♂), близкий к *M. silesiaca* L. Koch, 1875 и приведено переописание самцов *Pardosa masurae* Esyunin & Efimik, 1998. Четырнадцать видов исключены из списка фауны. Обсуждается структура фауны Средней Сибири и стационара "Мирное", приводится сравнение с другими северными фаунами.

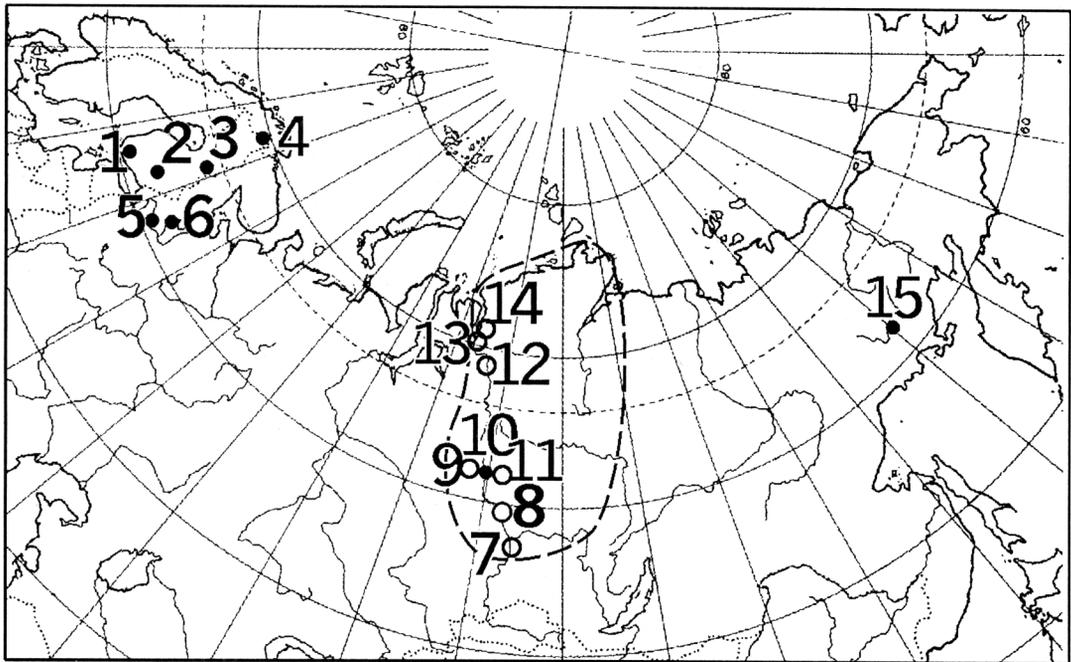
Introduction

Siberia has been the subject of intensive research on spider diversity during the two last decades. As a result

of this study several faunistic surveys of different parts of Siberia have been published: Middle Siberia (427 species, Eskov, 1988), northeast Siberia (549, Marusik et al., 1992a), the Sakhalin Area (450, Marusik et al., 1992b), Yakutia (424, Marusik et al., 1993), the Urals (780, Esyunin & Efimik, 1996), Altai (280, Marusik et al., 1996), the Polar Urals (174, Koponen et al., 1997), Tuva (614, Logunov et al., 1998; Marusik et al., 2000), Transbaikalia (432, Danilov, 1999), Mongolia (320, Marusik & Logunov, 1998). Since publication the first surveys many species have been described and nomenclatorial changes made, and many new finds reported. So a revision of the earlier data is badly needed to facilitate a more detailed zoogeographical analysis of the eastern Palaearctic.

To provide essential zoogeographical analysis it is very important to know the diversity of species in some local faunas, optionally lying at the same latitude or at least in the same biotic zone. Unfortunately such data is almost completely unavailable (cf. Marusik & Koponen, 2000) for Siberia. There are only two publications describing the diversity and spatial distribution of spiders in local faunas within Siberia: the Mirnoye Field Station (251 species, Eskov, 1981) and the Aborigin Field Station (ca. 350 species, Marusik, 1988). Although there are no check-lists in these publications, it is not difficult to compile lists from two other papers [Eskov, 1988 and Marusik, 1994], both of which were published in small and poorly distributed books.

In the westernmost part of the taiga zone, Finland, there are several well-studied localities. These local



Map. Well known local faunas in boreal zone (1–6, 10 & 15) and collecting sites (7–14) in Middle Siberia (—). 1 — Tvärminne, 2 — Mäntyharju, 3 — Kuusamo, 4 — Kevo, 5 — Nizhnesvirski Resrve, 6 — Kivach, 7 — Peredvinsk, 8 — Ust-Pit, 9 — Yelogui, 10 — Mirnoye, 11 — Birochana, 12 — Potapovo, 13 — Karaul, 14 — Vorontsovo, 15 — Aborigen. Filled circles — well studied local faunas, open circles — areas of collection in Middle Siberia by Rybalov.

Карта. Наиболее хорошо изученные фауны бореальной зоны Евразии (1–6, 10 & 15) и места сборов (7–14) в Средней Сибири (—). 1 — Твэрминне, 2 — Мäнтыхаржу, 3 — Куусамо, 4 — Кево, 5 — Нижнесви́рский заповедник, 6 — заповедник Кивач, 7 — Передвинск, 8 — Усть-Пит, 9 — Елогуй, 10 — Мирное, 11 — Биропчана, 12 — Потапово, 13 — Караул, 14 — Воронцово, 15 — Абориген. Заполненные кружки — хорошо изученные локальные фауны, открытые кружки — места коллектирования в Средней Сибири.

faunas include Tvärminne [60°N, 425 species; Palmgren, 1972], Mäntyharju [61°15'N, 317 species; Palmgren, 1977], Kuusamo [66°N, 240 species; Koponen & Viramo, 1998] and Kevo [69°45'N, 165 species; Koponen, 1984]. In eastern Fennoscandia there are two other well-studied local faunas: the Kivach Reserve (62°18'N) in Karelia with 275 species of spiders known [Tsellarius, 1993], and the Nizhnesvirski Reserve (ca 60°50'N) in the Leningrad Area with 354 species [Oliger, 1996].

The goal of this work is to 1) present an updated list of spiders occurring in Middle Siberia, 2) make survey of spiders at the Mirnoye field station, 3) list new material and species records from the region, 4) compare the present faunas with other well-known northern faunas.

Material and methods

The area covered in this survey is slightly larger than those in Eskov's [1988] check-list. Eskov's survey covered areas north of 62°N, while here we treat spiders living north of 57°N. The longitudinal limits of Middle Siberia are: 80°–110°E.

Material treated herein was collected by L.B. Rybalov and I.G. Vorobyeva from 1989 to 1997 in several localities within the Krasnoyarsk Province of Russia:

1) Yenisei River middle flow, Mirnoye Field Station, 62°19'N 89°02'E, 1988–1989; belongs to subzone of middle taiga.

2) Birochana River [right tributary of the middle Yenisei] 120 km E of Mirnoye Vill., ca 62°20'N 91°30'E, Summer 1989; belongs to subzone of middle taiga.

3) Yelogui River (left tributary of the middle Yenisei) 120 km W of Mirnoye Vill., ca 62°30'N 87°E, Summer 1990; belongs to subzone of middle taiga.

4) Yenisei River middle flow, Peredvinsk Vill., 57°N 93°30'E, June 1995; belongs to subzone of subboreal forests (Siberian analogues of the European mixed forests).

5) Yenisei River middle flow, Ust'-Pit Vill., 58°55'N 91°55'E, 07.1995; belongs to subzone of southern taiga.

6) Yenisei River down flow, Goroshykha Vill., ca 400 km upstream from Dudinka, 66°N 87°E, July–August, 1994–1995; belongs to subzone of northern taiga.

7) Taimyr Region, Yenisei River down flow, Potapovo Vill., 68°42'N 86°15'E, August 1995; belongs to taiga-tundra zone.

8) Yenisei River mouth, right bank, Karaul Vill., 70°08'N 83°13'E, August 1994; belongs to subzone of southern tundra.

9) Taimyr, Yenisei River down flow, Vorontsovo Vill., 71°30'N 83°E, August 1995; belongs to subzone of typical tundra.

Spiders were collected by square sampling (around 600 samples taken by 25x25 cm square and hand sorting) and pitfall trapping. Three localities (Mirnoye, Yelogui and Birochana) were studied in detail. Spatial distribution of spiders in these localities will be described in a separate paper [Rybalov & Vorobyeva, 2002].

Most of the linyphiid spiders were identified by A.V. Tanasevitch, all others (over 4000 adult specimens, over 3200 of them were from Mirnoye) by Yu.M. Marusik. Identified material was shared between Zoological Museum of the Moscow State University (ZMMU), Zoological Museum of

University of Turku, Finland (ZMUT), Institute for Biological Problems of the North (IBPN, Magadan), Siberian Zoological Museum (ISEA, Novosibirsk) and Naturhistoriska Riksmuseet Stockholm, Sweden (NRS).

Most of the unidentified species listed by Eskov [1988] were subsequently described as new. Nevertheless, the status of some species known only from females still remains unclear. We omit almost all of these from the presented list, especially if their generic placement is unclear.

Survey of species

Species new to the Middle Siberia

AGELENIDAE (1)

Paracoelotes birulai (Ermolajev, 1926)

COMMENTS. This species has a Siberio-Central Asian boreo-montane range: from Kyrgyzstan north to West Sayan and along South Siberia eastward to Khabarovsk Prov. [Marusik et al., 2000]. The new record extends the northern limit of its range about 5°.

CLUBIONIDAE (1)

Clubiona caeruleascens L.Koch, 1887

COMMENTS. This species is new both to Middle Siberia and Mirnoye. It has a trans-Palaeartic boreo-nemoral range and occurs from Europe (north to southern Fennoscandia) to north Cisokhotia and Sakhalin, north to the northern Urals, southward to Azerbaijan, Kazakhstan and Inner Mongolia [Marusik et al., 2000]. The record from Mirnoye is the northernmost locality of this species in Siberia, and coincides with those in the northern Urals.

DICTYNIDAE (1)

Mastigusa macrophthalma (Kulczyński, 1897)*

COMMENTS. It is a species new to both Middle Siberia and Mirnoye. As mentioned by Roberts [1995], this species may be a junior synonym of *M. arietina* (Thorell, 1872). The two species differ only in eye sizes and interdistances. Specimens from Peredvinsk and Mirnoye without doubt belong to the large-eyed form. Previously *M. arietina* was known to occur west of Ural. The new record extends the known range more than 30° east. It seems that the Yenisei River represents the eastern limit of distribution for this species, as it does for many other West Palaeartic taxa.

GNAPHOSIDAE (5)

Callilepis nocturna (Linnaeus, 1758)

COMMENTS. It has a trans-Palaeartic polyzonal range and occurs from Europe, north to Swedish Lapland and the Lena River, northeast to the upper Kolyma River and southward to Hokkaido and Russian Far East [Marusik et al., 2000]. This new record does not extend the northern limit of distribution in Siberia, which is the middle reaches of the Lena River [ca 65°N, Marusik et al., 1993],

Haplodrassus cognatus (Westring, 1862)

COMMENTS. It has a trans-Palaeartic boreo-nemoral range and occurs from western Europe to Hokkaido, north to the northern Urals and Tomsk, and south to Greece [Marusik et al., 2000]. The record of this species from Novaya Zemlya [Holm, 1973] requires confirmation and may refer to an arcto-montane species, *H. hiemalis* (Emerton, 1909). *H. cognatus*

was once reported from Middle Siberia [Eskov, 1986], but this record has been questioned [Eskov, 1988].

Micaria aenea Thorell, 1871

COMMENTS. This species is new both to Middle Siberia and Mirnoye. It has a circum-Holarctic boreo-nemoral range and occurs in Eurasia from Central and Northern Europe toward Tuva, Altai and Mongolia, northeast to the upper Kolyma River [Marusik et al., 2000] and north to the middle Lena River [Marusik et al., 1993].

Micaria yeniseica Marusik & Koponen, sp.n.

COMMENTS. This is a new species, a description of which is given below. So far it is known only from the Mirnoye Field Station.

Zelotes clivicola (L.Koch, 1870)

COMMENTS. This species has a Euro-Baikalian boreo-nemoral distribution. The new locality is its northernmost in east Palaeartic, exceeding previous northern Urals and Trans-baikalian records.

LINYPHIIDAE (16)

Abiskoa abiskoensis (Holm, 1945)

COMMENTS. While this species has a trans-Palaeartic range [Marusik et al., 2000] it has not been previously reported from Middle Siberia.

Agyreta decora (O.P.-Cambridge, 1870)*

COMMENTS. This species, new to Siberia, was known to be distributed from Western Europe to the Urals [Eskov, 1994].

Allomengea dentisetis (Grube, 1861)

COMMENTS. While this species has a Siberio-northern Nearctic range [Eskov, 1994; Buckle et al., 2001] it was previously unknown in Middle Siberia.

Baryphyma gowerense (Locket, 1965)

COMMENTS. Previously known to be distributed west of South Yamal in the Palaeartic and in the Nearctic [Eskov, 1994]. The Yenisei River is the easternmost point of distribution within Asia, and the Mirnoye Field Station is the first record for Middle Siberia.

Bathyphantes parvulus (Westring, 1851)

COMMENTS. While this species has a trans-Palaeartic range, it was not previously recorded from Middle Siberia.

Hilaira nubigena Hull, 1911

COMMENTS. It is new both to Middle Siberia and Mirnoye, it is known from western Europe to Chukotka [Eskov, 1994].

Lepthyphantes distichus Tanasevitch, 1986

COMMENTS. This species was described and known only from the south part of Krasnoyarsk Province, therefore the record from Goroshykha is the northernmost point of the range.

Palliduphantes alutaceus (Simon, 1884)

COMMENTS. This species was known to be distributed from France to western Siberia [cf. Eskov, 1994], therefore Ust'-Pit is the north-easternmost locality of the range.

Table 1. List of spiders from Middle Siberia and material collected by Rybalov.
(p — previously recorded species, N — species new to Middle Siberia, m and f — male and female respectively).

Таблица 1. Список пауков средней Сибири и материал собранный Рыбаловым
(p — ранее зарегистрированные виды, N — вид новый для Средней Сибири, m и f — самка и самец соответственно).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birbichana 62,45°N 91.5°E	Yelogui 62,5°N 87°E	Gorshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karauli 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
AGELENIDAE (1)											
<i>Paracoelotes birulai</i> (Emolajev, 1926)	N	25mf									
AMAUROBIIDAE (1)											
<i>Arctobius agelenoides</i> (Emerton, 1919)	p										
ARANEIDAE (16)											
<i>Aculepeira carbonarioides</i> (Keyserling, 1892)	p										
<i>Aculepeira packardi</i> (Thorell, 1989)	p										
<i>Araneus alsine</i> Walckenaer, 1802	p			p							
<i>Araneus nordmanni</i> (Thorell, 1870)	p			p							
<i>Araneus quadratus</i> Clerck, 1758	p			p							
<i>Araneus washingtoni</i> Levi, 1971	p										
<i>Araniella displicata</i> (Hentz, 1847)	p			1m							
<i>Araniella proxima</i> (Kulczynski, 1885)	p										
<i>Cercidia prominens</i> (Westring, 1851)	p			2m							
<i>Cyclosa conica</i> (Pallas, 1772)	p										
<i>Cyphepeira silvicultrix</i> (C.L.Koch, 1835)	p		1f	p							
<i>Gibbaranea omoeda</i> (Thorell, 1870)	p		2mf								
<i>Hypsosinga albovittata</i> (Westring, 1851)	p			p							
<i>Larinioides cornutus</i> (Clerck, 1757)	p			p							
<i>Larinioides patagiatus</i> (Clerck, 1757)	p		1m	2mf	1f						
<i>Singa hamata</i> (Clerck, 1757)	p			p							
CLUBIONIDAE (11)											
<i>Clubiona caerulescens</i> L.Koch, 1886	N			8m							
<i>Clubiona diversa</i> (O.P.-Cambridge, 1862)	p										
<i>Clubiona germanica</i> Thorell, 1870	p			1m							
<i>Clubiona interjecta</i> L.Koch, 1879	p										
<i>Clubiona kulczynskii</i> Lessert, 1905	p	1m	1m	17mf	1f	2mf		1m			
<i>Clubiona lutescens</i> Westring, 1851	p			18mf							
<i>Clubiona pallidula</i> (Clerck, 1757)	p	1m		1m							
<i>Clubiona reclusa</i> O.P.-Cambridge, 1863	p			7mf							
<i>Clubiona stagnatilis</i> Kulczynski, 1897	p			p							
<i>Clubiona subsultans</i> Thorell, 1875	N	1m	1m	4mf							
<i>Clubiona trivialis</i> C.L.Koch, 1834	p			p							

Table 1 (contituing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91.5°E	Yelogui 62,5°N 87°E	Gorshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
DICTYNIDAE (8)											
<i>Arctella lapponica</i> (Holm, 1945)	p										
<i>Dictyna arundinacea</i> (Linnaeus, 1758)	p		2m								
<i>Dictyna major</i> Menge, 1869	p										= <i>D. hamifera</i> Thorell, 1872
<i>Dictyna pusilla</i> Thorell, 1856	p		p								
<i>Dictyna uncinata</i> Thorell, 1856	p		p								<i>D. uncinata</i> [lapsus]
<i>Emblyna mitis</i> Thorell, 1875	p		p								<i>Dictyna m.</i>
<i>Hackmania prominula</i> (Tullgren, 1948)	p		9mf					4mf			<i>Argenna p.</i>
<i>Mastigusa macrophthalma</i> (Kulczynski, 1897)	N	1m	2f								
DOLOMEDIDAE (1)											
<i>Dolomedes fimbriatus</i> (Clerck, 1757)	p		1f	p							
GNAPHOSIDAE (22)											
<i>Callilepis nocturna</i> (Linnaeus, 1758)	N		1f								
<i>Gnaphosa borea</i> Kulczynski, 1908	p							1m			
<i>Gnaphosa chola</i> Ovtsharenko & Marusik, 1988	p										<i>G. antipola</i> Chamberlin, 1933
<i>Gnaphosa gracilior</i> Kulczynski, 1901	p										
<i>Gnaphosa microps</i> Holm, 1939	p		p					1m			<i>G. brumalis</i> Thorell, 1875
<i>Gnaphosa muscorum</i> L.Koch, 1866	p				1m	1m		1m			
<i>Gnaphosa orites</i> Chamberlin, 1922	p							7mf	2mf		
<i>Gnaphosa sticta</i> Kulczynski, 1908	p										
<i>Haplodrassus cognatus</i> (Westring, 1862)	N	1m	35mf			1m					
<i>Haplodrassus hiemalis</i> (Emerton, 1909)	p							12m			
<i>Haplodrassus moderatus</i> (Kulczynski, 1897)	p	2m	1m	35mf		2m					
<i>Haplodrassus soerenseni</i> (Strand, 1900)	p	12mf	5m	212mf							
<i>Micaria aenea</i> Thorell, 1871	N		16mf								
<i>Micaria alpina</i> L.Koch, 1872	p		13mf								
<i>Micaria nivosa</i> L. Koch, 1866	p		8mf								
<i>Micaria pulicaria</i> Sundevall, 1831	p	1f	58mf								
<i>Micaria tripunctata</i> Holm, 1979	p		2mf								
<i>Micaria yeniseica</i> sp.n.	N		1m								
<i>Zelotes clivicola</i> (L.Koch, 1870)	N	1m	5mf								
<i>Zelotes fratris</i> Chamberlin, 1920	p		1m	17mf	1f	1f					

Table 1 (contituing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91.5°E	Yelogui 62,5°N 87°E	Goroshykhа 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)											
<i>Allomengea scopigera</i> (Grube, 1859)	p	58mf	18mf	p			113mf	60mf			
<i>Allomengea vidua</i> (L.Koch, 1879)	p			2f							
<i>Anguliphantes cerinus</i> (L.Koch, 1879)	p	1m	5mf	42mf							<i>Lepthyphantes c.</i>
<i>Anguliphantes dybowskii</i> (O.P.-Cambridge, 1873)	p			6mf							<i>Lepthyphantes d.</i>
<i>Anguliphantes sibiricus</i> Tanasevitch, 1986	p	2mf	7mf	1m			2f	1f			<i>Lepthyphantes s.</i>
<i>Aphileta misera</i> (O.P.-Cambridge, 1882)	p			p							
<i>Araeoncus crassiceps</i> (Westring, 861)	p			p							
<i>Araeoncus vorkutensis</i> Tanasevitch, 1984	p			p							
<i>Archaeoncus sibiricus</i> Eskov, 1988	p										
<i>Baryphyma gowerense</i> (Locket, 1965)	N			4f							
<i>Bathyphantes approximatus</i> (O.P.Cambridge, 1871)	p			p							
<i>Bathyphantes canadensis</i> (Emerton, 1882)	p										
<i>Bathyphantes eumenis</i> (L.Koch, 1879)	p										
<i>Bathyphantes gracilis</i> (Blackwall, 1841)	p			p							
<i>Bathyphantes humilis</i> (L.Koch, 1879)	p										
<i>Bathyphantes jeniseicus</i> Eskov, 1979	p			p							
<i>Bathyphantes parvulus</i> (Westring, 1851)	N		1f	2m							
<i>Bathyphantes reprobus</i> Kulczynski, 1916	p			5mf							
<i>Bathyphantes setiger</i> (O.P.Cambridge, 1894)	p			p							
<i>Bathyphantes simillimus</i> (L.Koch, 1879)	p	6f	15mf	p					3m		= <i>eumenoides</i> Holm 1967
<i>Bathyphantes</i> sp. 1	p										? = <i>simillimus</i>
<i>Bishopiana hypoarctica</i> Eskov, 1988	p										
<i>Bolyphantes alticeps</i> (Sundevall, 1832)	p			p							
<i>Bolyphantes index</i> (Thorell, 1856)	p										
<i>Bolyphantes luteolus</i> (Blackwall, 1833)	p										
<i>Caronita limnaea</i> Crosby & Bishop, 1927	p			p							
<i>Centromerus arcanus</i> (O.P.-Cambridge, 1871)	p			3mf							
<i>Centromerus clarus</i> (L.Koch, 1879)	p	2f	5mf	16mf			2f	2mf			
<i>Centromerus levitarsis</i> (Simon, 1884)	p			p							
<i>Centromerus semiater</i> (L.Koch, 1879)	p										
<i>Centromerus silvaticus</i> (Blackwall, 184)	p	1f		p							
<i>Ceraticelus bulbosus</i> (Emerton, 1882)	p		1f	p							<i>C. sibiricus</i> Eskov, 1987

Table 1 (contituing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91.5°E	Yelogui 62,5°N 87°E	Gorohykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)											
<i>Ceratinella alaskae</i> Chamberlin & Gertsch, 1947)	p										
<i>Ceratinella brevis</i> (Wider, 1834)	p		p								
<i>Ceratinella</i> sp.1	p		p								
<i>Ceratinella</i> sp.2	p		p								
<i>Ceratinella wideri</i> (Thorell, 1871)	p		1f	p				2f			
<i>Cnephalocotes obscurus</i> (Blackwall, 1834)	p			3mf	3						
<i>Collinsia borea</i> (L.Koch, 1879)	p										
<i>Collinsia caliginosa</i> (L.Koch, 1879)	p		p								
<i>Collinsia dentata</i> Eskov, 1990	p										<i>Collinsia</i> sp. 1
<i>Collinsia distincta</i> (Simon, 1884)	p		p								
<i>Collinsia holmgreni</i> (Thorell, 1872)	p										
<i>Collinsia jeniseica</i> Eskov, 1989	p										
<i>Collinsia spetsbergensis</i> (Thorell, 1872)	p										
<i>Collinsia submissa</i> (L.Koch, 1879)	p		p								
<i>Concavocephalus rubens</i> Eskov, 1989	p										
<i>Connithorax barbatus</i> (Eskov, 1988)	p							4mf	1m		
<i>Crosbylonia borealis</i> Eskov, 1988	p										
<i>Dactilopisthes video</i> (Chamberlin & Ivie, 1947)	p										<i>Scytiella</i> v.; <i>S. komi</i> Tanasevitch, 1984
<i>Deciphantes decipiens</i> (L.Koch, 1879)	p		3f	p			3f	1f			<i>Leptyphantas</i> d.
<i>Dicymbium facetum</i> (L.Koch, 1879)	p			p			1f				
<i>Dicymbium libidinosum</i> (Kulczynski, 1926)	p			p							
<i>Diplocentria bidentata</i> (Emerton, 1882)	p			4mf			7mf				
<i>Diplocentria rectangulata</i> (Emerton, 1915)	p										<i>Microcentria pusilla</i> (Schenkel, 1925)
<i>Diplocephalus barbatus</i> (L.Koch, 1879)	p										
<i>Diplocephalus connatus</i> Bertkau, 1889	p										
<i>Diplocephalus cristatus angusticeps</i> Holm, 1973	p			p							
<i>Diplocephalus mirabilis</i> Eskov, 1988	p										
<i>Diplocephalus montanus</i> Eskov, 1988	p										
<i>Diplocephalus sphagnicolus</i> Eskov, 1988	p										
<i>Diplocephalus subrostratus</i> (O.P.-Cambridge, 1873)	p		6m	p							
<i>Diplocephalus uliginosus</i> Eskov, 1988	p										
<i>Diplostyla concolor</i> (Wider, 1834)	p			p							

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91,5°E	Yelogui 62,5°N 87°E	Gorshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)											
<i>Dismodicus bifrons</i> (Blackwall, 1841)	p			p							
<i>Drapetisca socialis</i> (Sundevall, 1832)	p?			4f							
<i>Drepanotylus borealis</i> Holm, 1945	p			p							
<i>Drepanotylus holmi</i> (Eskov, 1981)	p										
<i>Entelecara erythropus</i> (Westring, 1851)	p			p							
<i>Entelecara sombra</i> (Chamberlin & Ivie, 1947)	p			p							<i>E. errata</i> (O.P.-Cambridge, 1913)
<i>Erigone arctica sibirica</i> Kulczynski, 1908	p			p						3m	
<i>Erigone atra</i> Blackwall, 1883	p			p							
<i>Erigone dentipalpis</i> Wider, 1834	p										
<i>Erigone hypoarctica</i> Eskov, 1989	p										<i>Erigone</i> sp. 1
<i>Erigone psychrophila</i> Thorell, 1872	p										
<i>Erigone remota</i> L.Koch, 1869	p										
<i>Erigone tirolensis</i> L.Koch, 1872	p										
<i>Erigonella hiemalis</i> (Blackwall, 1841)	p										
<i>Erigonella ignobilis</i> (O.P.-Cambridge, 1871)	p										
<i>Estrandia grandaeva</i> (Keyserling, 1886)	p			p							<i>Linyphia</i> g.
<i>Flagelliphantes bergstroemi</i> (Schenkel, 1931)	p		1m	2mf							<i>Lepthyphantes</i> b.
<i>Gibbothorax chemovi</i> Eskov, 1989	p							4mf	1m		<i>Rhaebothorax</i> sp. 3
<i>Glyphesis asiaticus</i> Eskov, 1989	p										<i>Glyphesis</i> sp. 1
<i>Glyphesis cottonae</i> (La Touche, 1946)	p			p							
<i>Gnathonarium dentatum</i> (Wider, 1834)	p										
<i>Gnathonarium suppositum</i> (Kulczynski, 1885)	p										
<i>Gnathonarium taczanowskii</i> (O.P.-Cambridge, 1873)	p			p							
<i>Gonatium rubellum</i> (Blackwall, 1841)	p			p							
<i>Gonatium rubens</i> (Blackwall, 1841)	p			p							
<i>Gongylidium rufipes</i> (Linnaeus, 1758)	p										
<i>Helophora insignis</i> (Blackwall, 1841)	p		1f	p			4mf				
<i>Hilaira asiatica</i> Eskov, 1987	p										
<i>Hilaira cf. tatica</i> Kulczynski, 1915	p	1f		p			7mf	1f			<i>H. tatica tatica</i>
<i>Hilaira devitata</i> Eskov, 1987	p										
<i>Hilaira gibbosa</i> Tanasevitch, 1982	p			3mf							

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91,5°E	Yelogui 62,5°N 87°E	Goroshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)											
<i>Lasiargus hirsutus</i> (Menge, 1869)	p								1m		
<i>Lasiargus pilipes</i> (Kulczynski, 1908)	p			p							<i>Lasiargus</i> sp. 1
<i>Lepthyphantes distichus</i> Tanasevitch, 1986	N						1f				
<i>Lepthyphantes expunctus</i> (O.P.-Cambridge, 1875)	p						1f				
<i>Lepthyphantes laricetorum</i> Tanasevitch & Eskov, 1987	p							1m			
<i>Lepthyphantes luteipes</i> (L.Koch, 1879)	p			p							
<i>Lepthyphantes nenilini</i> Tanasevitch, 1987	p										
<i>Lepthyphantes terrenus</i> (L.Koch, 1879)	p										
<i>Leptorhoptum robustum</i> (Westring, 1851)	p		61mf	p	5mf	1f	147mf	20mf			
<i>Linyphia triangularis</i> (Clerck, 1757)	p										
Linyphiidae (Erigoninae) gen.1 sp.1	p			p							
<i>Lophomma cognatum</i> Holm, 1962	p										
<i>Lophomma punctatum</i> (Blackwall, 1841)	p			p							
<i>Macrargus multesimus</i> (O.P.-Cambridge, 1875)	p	2f	1f	1f	1f		4mf	3f			
<i>Maro borealis</i> Eskov, 1991	p										<i>Maro</i> sp. 1
<i>Maro flavescens</i> (O.P.-Cambridge, 1873)	p		2f	p							
<i>Maro saaristoi</i> Eskov, 1980	p			p			1m				
<i>Maro sibiricus</i> Eskov, 1980	p			p							
<i>Masikia indistincta</i> (Kulczynski, 1908)	p										" <i>Minyriolus</i> " <i>i.</i>
<i>Maso sundevalli</i> (Westring, 1851)	p							1f			
<i>Mecynargus borealis</i> (Jackson, 1930)	p							1f		1m	
<i>Mecynargus hypnicola</i> Eskov, 1988	p										<i>Rhaebothorax</i> sp. 1
<i>Mecynargus monticola</i> (Holm, 1943)	p			p							<i>Rhaebothorax</i> <i>m.</i>
<i>Mecynargus paetulus</i> (O.P.-Cambridge, 1875)	p										<i>Rhaebothorax</i> <i>p.</i>
<i>Mecynargus sphagnicola</i> (Holm, 1939)	p										= <i>M. jamalensis</i>
<i>Mecynargus tundricola</i> Eskov, 1988	p										<i>Rhaebothorax</i> sp. 3
<i>Mecynargus tungusicus</i> (Eskov, 1981)	p										<i>Rhaebothorax</i> <i>t.</i>
<i>Megalepthyphantes nebulosus</i> (Sundevall, 1829)	p										<i>Lepthyphantes</i> <i>n.</i>
<i>Micrargus herbigradus</i> (Blackwall, 1854)	p		1f	1f							
<i>Microlinyphia pusilla</i> (Sundevall, 1829)	p			p							<i>Linyphia</i> <i>pusilla</i>

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91.5°E	Yelogui 62,5°N 87°E	Goroshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)											
<i>Microneta viaria</i> (Blackwall, 1841)	p	2f	3f	5mf							
<i>Minyrioloides trifrons</i> (O.P.-Cambridge, 1863)	p			p							
<i>Minyriolus pusillus</i> (Wider, 1834)	p			p							<i>M. pusillus</i>
<i>Monocerellus montanus</i> Tanasevitch, 1983	p										
<i>Mughiphantes suffusus</i> Strand, 1900	p										<i>Lepthyphantes s.</i>
<i>Mughiphantes taczanowskii</i> (O.P.-Cambridge, 1873)	p			p							<i>Lepthyphantes t.</i>
<i>Nenilinium asiaticum</i> Eskov, 1988	p										
<i>Neriene clathrata</i> (Sundevall, 1829)	p			p							<i>Linyphia c</i>
<i>Neriene emphana</i> (Walckenaer, 1841)	p	1f	11f								
<i>Neriene montana</i> (Clerck, 1757)	p		1f	p							<i>Linyphia m.</i>
<i>Notioscopus jamalensis</i> Grese, 1909	p			p							
<i>Notioscopus sarcinatus</i> (O.P.-Cambridge, 1872)	p			p							
<i>Obsuriphantes pseudoobscurus</i> (Marusik & al., 1996)	p			p							<i>Lepthyphantes obscurus</i> (Blackwall, 1841)
<i>Oedothorax agrestis</i> (Blackwall, 1853)	p										
<i>Oedothorax gibbosus</i> (Blackwall, 1841)	p			p							
<i>Oedothorax retusus</i> (Westring, 1851)	p			4mf							
<i>Oreonetides helsdingeni</i> Eskov, 1984	p										
<i>Oreonetides sajanensis</i> Eskov, 1991	p										
<i>Oreonetides vaginatus</i> (Thorell, 1872)	p	1f		p							
<i>Oryphantes geminus</i> (Tanasevitch, 1982)	p			p		1f					<i>Lepthyphantes g.</i>
<i>Palliduphantes alutaceus</i> Simon, 1884	N		1f								
<i>Panamomops dybowski</i> (O.P.-Cambridge, 1873)	p		15mf	17mf			27mf	5f			
<i>Paraeboria jeniseica</i> (Eskov, 1981)	p			p							<i>Typhochrestus jeniseicus</i>
<i>Paraglyphesis polaris</i> Eskov, 1991	p										
<i>Pelecopsis dorniana</i> Heimer, 1987	p			1m		1m					
<i>Pelecopsis mengei</i> (Simon, 1884)	p			p							
<i>Pelecopsis parallela</i> (Wider, 1834)	p			p						4mf	
<i>Perregrinus deformis</i> Tanasevitch, 1982	p						1m				<i>Peregrinus d</i>
<i>Perro putoranica</i> Eskov, 1986	p										
<i>Pityohyphantes phrygianus</i> (C.L.Koch, 1836)	p		1f	p							
<i>Pocadicnemis pumila</i> (Blackwall, 1841)	p			p							

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93.5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91.5°E	Yelogui 62.5°N 87°E	Goroshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)											
<i>Poeciloneta pallida</i> Kulczynski, 1908	p										
<i>Poeciloneta vakhanka</i> Tanasevitch, 1989	N			1f							
<i>Poeciloneta variegata</i> (Blackwall, 1841)	p			p							
<i>Porrhomma borealis</i> Banks, 1892	p			p							
<i>Porrhomma campbelli</i> F.O.P.-Cambridge, 1894	N			9mf							
<i>Porrhomma montanum</i> Jackson, 1913	p			p							
<i>Porrhomma pallidum</i> Jackson, 1913	p			p							
<i>Porrhomma pygmaeum</i> (Blackwall, 1841)	p										
<i>Praestigia groenlandica</i> Holm, 1967	p										
<i>Praestigia kulczynskii</i> Eskov, 1979	p			p							
<i>Praestigia pini</i> (Holm, 1950)	p			p							
<i>Praestigia</i> sp. 1	p										
<i>Procerocymbium yenseicum</i> Marusik & Koponen, 2001	p										?
<i>Proislandiana pallida</i> (Kulczynski, 1908)	p										
<i>Pseudocyba miracula</i> Tanasevitch, 1984	p			p							
<i>Pseudomaro</i> (?) sp. 1	p			p							
<i>Pseudowubana wagrae</i> (O.P.-Cambridge, 1973)	p			p							<i>Veles w.</i>
<i>Savignia borea</i> Eskov, 1988	p										
<i>Savignia frontata</i> Blackwall, 1833	p			p						1f	
<i>Savignia nenilini</i> Marusik, 1988	p										<i>S. birostrum</i> (Chamberlin & Irie, 1947)
<i>Savignia producta</i> Holm, 1977	p			p							
<i>Scandichrestus tenuis</i> (Holm, 1943)	N			6mf							
<i>Sciastes hyperboreus</i> (Kulczynski, 1908)	p										
<i>Scotinotylus alpinus</i> (L.Koch, 1869)	p			p							
<i>Scotinotylus alpinus</i> (Banks, 1896)	p										
<i>Scotinotylus evansi</i> (O.P.-Cambridge, 1894)	p										
<i>Scotinotylus protervus</i> (L.Koch, 1879)	p			p							
<i>Scotinotylus sacer</i> (Crosby, 1929)	p										
<i>Semljicola angulatus</i> (Holm, 1963)	p			p							<i>Eboria angulata</i>
<i>Semljicola arcticus</i> (Eskov, 1989)	p										<i>Latithorax</i> sp. 1
<i>Semljicola barbiger</i> (L.Koch, 1879)	p										<i>Eboria assimilis</i> (Holm, 1945)
<i>Semljicola faustus</i> (O.P.-Cambridge, 1900)	N			3m							

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91,5°E	Yelogui 62,5°N 87°E	Goroshykhа 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)	p										
<i>Semljicola lapponicus</i> (Holm, 1939)	p										<i>Eboria lapponica</i>
<i>Semljicola latus</i> (Holm, 1939)	p			p							<i>Latithorax l.</i>
<i>Semljicola simplex</i> (Kulczynski, 1908)	p										<i>Eboria s.</i>
<i>Semljicola thaleri</i> (Eskov, 1981)	p		4mf	p							<i>Latithorax t.</i>
<i>Sibirocyba incerta</i> Kulczynski, 1916	p										<i>Tapino cyba l.</i>
<i>Silometopoides sphagnicolus</i> Eskov & Marusik, 1992	p										
<i>Silometopus elegans</i> (O.P.-Cambridge, 1872)	p			p							
<i>Silometopus reussi</i> (Thorell, 1871)	p			p							
<i>Silometopus uralensis</i> Tanasevitch, 1985	p										
<i>Sisicus apertus</i> (Holm, 1939)	p										
<i>Stemonyphantes conspersus</i> (L.Koch, 1879)	p			1m							
<i>Stemonyphantes sibiricus</i> (Grube, 1861)	p		1m	p					4m		<i>S. lineatus</i> (Linnaeus, 1758)
<i>Styloctetor romana</i> (O.P.-Cambridge, 1872)	p										<i>Ceratinopsis romana</i>
<i>Styloctetor stativa</i> (Simon, 1881)	p			p							<i>Ceratinopsis stativus</i>
<i>Tallusia experta</i> (O.P.-Cambridge, 1871)	p			p							<i>Centromerus expertus</i>
<i>Tanasevitchia uralensis</i> (Tanasevitch, 1983)	p										
<i>Taranuncus setosus</i> (O.P.-Cambridge, 1863)	p										
<i>Tenuiphantes alacris</i> (Blackwall, 1853)	N		2m	1m							<i>Lepthyphantes a.</i>
<i>Tenuiphantes mengei</i> (Kulczynski, 1887)	p			p							<i>Lepthyphantes m.</i>
<i>Tenuiphantes nigriventris</i> (L.Koch, 1879)	p	3f	40mf	1f	1m	1f	38mf	16f			<i>Lepthyphantes n.</i>
<i>Tenuiphantes tenuis</i> (Blackwall, 1852)	N			9mf							
<i>Thaleria evenkiensis</i> Eskov & Marusik, 1992	p										<i>Thaleria sp. 1</i>
<i>Thaleria orientalis</i> Tanasevitch, 1984	p			p							
<i>Thyreostenius biovatus</i> (O.P.-Cambridge, 1875)	N			8f							
<i>Thyreostenius parasiticus</i> (Westring, 1851)	p			p							
<i>Tibioploides arcuatus</i> (Tullgren, 1955)	p		1m	p							
<i>Tibioplus diversus</i> (L.Koch, 1879)	p		3mf	1m		4mf	1f				
<i>Tiso aestivus</i> (L.Koch, 1872)	p			p							
<i>Tmeticus affinis</i> (Blackwall, 1855)	p			p							
<i>Tmeticus nigriceps</i> (Kulczynski, 1916)	p										
<i>Tmeticus tolli</i> Kulczynski, 1908	p			p							
<i>Troxochrus scabriculus</i> (Westring, 1851)	p			4mf							

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91,5°E	Yelogui 62,5°N 87°E	Gorshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LINYPHIIDAE (continuing)											
<i>Tubercithorax subarcticus</i> (Tanasevitch, 1984)	p								11mf	1f	<i>Rhaebothorax s.</i>
<i>Tunagyna debilis</i> (Banks, 1892)	p										
<i>Typhochraestus latithorax</i> (Strand, 1905)	p										
<i>Typhochrestoides baikalensis</i> Eskov, 1990	p										
<i>Ummeliata sibirica</i> (Eskov, 1980)	p			p							
<i>Victorium putoranicum</i> Eskov, 1989	p										
<i>Wabasso hilaroides</i> Eskov, 1998	p										
<i>Wabasso millidgei</i> Eskov, 1988	p										
<i>Wabasso questio</i> (Chamberlin, 1948)	p										
<i>Wabasso tungusicus</i> Eskov, 1988	p										
<i>Walckenaeria alticeps</i> (Denis, 1952)	N										
<i>Walckenaeria antica</i> (Wider, 1834)	p			p							
<i>Walckenaeria atrotibialis</i> O.P.-Cambridge, 1878	p		10mf	p							
<i>Walckenaeria capito</i> (Westring, 1861)	p			p							
<i>Walckenaeria cucullata</i> (C.L.Koch, 1836)	p										
<i>Walckenaeria cuspidata</i> Blackwall, 1833	p										
<i>Walckenaeria fraudatrix</i> Millidge, 1983	p			p		1m					
<i>Walckenaeria karpinski</i> (O.P.-Cambridge, 1873)	p						1m				
<i>Walckenaeria kochi</i> (O.P.-Cambridge, 1872)	p			p							
<i>Walckenaeria koenboutjei</i> Baert, 1994	N						1m				<i>W. (Tigellinus) sp. 1</i>
<i>Walckenaeria korobeinikovi</i> Esyunin & Efimik, 1996	p			p							<i>W. clavicomis</i> (Emerton, 1882)
<i>Walckenaeria lepida</i> (Kulczynski, 1885)	p			p							<i>W. unicomis</i> (O.P.-Cambridge, 1861)
<i>Walckenaeria nodosa</i> (O.P.-Cambridge, 1873)	p			p				1f			
<i>Walckenaeria nudipalpis</i> (Westring, 1851)	p			p							
<i>Walckenaeria palmgreni</i> Eskov & Marusik, 1994	p			p							<i>W. (Trachynella) sp. 2</i>
<i>Walckenaeria picetorum</i> (Palmgren, 1976)	p		1f	p							
<i>Wubanoides fissus</i> (Kulczynski, 1926)	p										
<i>Wubanoides uralensis</i> (Pakhorukov, 1981)	p			p							<i>W. longicomis</i> Eskov, 1986
<i>Zornella cultrigera</i> (L.Koch, 1879)	p		2mf	2f			7mf	1f	1f		

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91.5°E	Yelogui 62,5°N 87°E	Goroshykhа 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LIOCRANIDAE (4)											
<i>Agroeca brunnea</i> (Blackwall, 1833)	p	5f	8f	~90mf		1f					
<i>Agroeca maculata</i> (L.Koch, 1879)	p			p							
<i>Agroeca omata</i> Banks, 1892	N	1m	1f	~30f							
<i>Agroeca proxima</i> (O.P.-Cambridge, 1871)	N			~30m							
LYCOSIDAE (50)											
<i>Acantholycosa lignaria</i> (Clerck, 1757)	N	1m									
<i>Acantholycosa norvegica</i> (Thorell, 1875)	p			3mf							
<i>Acantholycosa sibirica</i> (Kulczynski, 1908)	p										
<i>Alopecosa aculeata</i> (Clerck, 1757)	p			90mf	18mf	7mf		1f			
<i>Alopecosa</i> aff. <i>pulverulenta</i> (Clerck, 1757)	N			85mf		2mf					
<i>Alopecosa albostrata</i> (Grube, 1861)	p			1m			1f				
<i>Alopecosa borea</i> (Kulczynski, 1908)	p							3f			<i>A. solivaga borea</i>
<i>Alopecosa</i> cf. <i>pictilis</i> (Emerton, 1885)	p										<i>A. pictilis</i>
<i>Alopecosa hirtipes</i> (Kulczynski, 1907)	p								6f		
<i>Alopecosa mutabilis</i> (Kulczynski, 1908)	N							1f			
<i>Alopecosa pulverulenta</i> (Clerck, 1757)	p			p	16mf						
<i>Alopecosa sibirica</i> (Kulczynski, 1908)	p										
<i>Alopecosa solivaga</i> (Kulczynski, 1901)	p										<i>A. solivaga solivaga</i>
<i>Alopecosa taeniata</i> (C.L.Koch, 1835)	p	86mf	1m								missed
<i>Arctosa stigmosa</i> (Thorell, 1872)	p			p							
<i>Hygrolycosa rubrofasciata</i> (Ohlert, 1865)	N			4mf	3mf						
<i>Pardosa adustella</i> (Roewer, 1951)	p										
<i>Pardosa agricola</i> (Thorell, 1856)	p			47mf							
<i>Pardosa algens</i> (Kulczynski, 1908)	p										
<i>Pardosa atrata</i> (Thorell, 1873)	p										
<i>Pardosa</i> cf. <i>lugubris</i> (Walckenaer, 1802)	p	3mf	1f								
<i>Pardosa chionophila</i> L.Koch, 1879	p										
<i>Pardosa eiseni</i> (Thorell, 1875)	p				2f			2f			
<i>Pardosa fulvipes</i> (Collett, 1875)	p										
<i>Pardosa hyperborea</i> (Thorell, 1872)	p			8mf							
<i>Pardosa indecora</i> L.Koch, 1879	p							5f	4f		missed
<i>Pardosa jeniseica</i> Eskov & Marusik, 1995	p			p							<i>Pardosa</i> sp. 2

Table 1 (continuing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91.5°E	Yelogui 62,5°N 87°E	Gorshykha 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
LYCOSIDAE (continuing)											
<i>Pardosa lapponica</i> (Thorell, 1872)	p										
<i>Pardosa lasciva</i> (L.Koch, 1879)	p	4mf		498mf	16mf	19mf					
<i>Pardosa lyrata</i> (Odenwall, 1901)	p										
<i>Pardosa masurae</i> Esyunin & Efimik, 1998	N?			33mfj							? <i>Pardosa</i> sp. 4
<i>Pardosa oksalai</i> Marusik & al., 1996	N				8mf						
<i>Pardosa oljunae</i> Lobanova, 1978	N			5mf				1f			
<i>Pardosa palustris</i> (Linnaeus, 1758)	p			87mf							
<i>Pardosa riparia</i> (C.L.Koch, 1833)	p			25mf							
<i>Pardosa schenkeli</i> Lessert, 1904	p										
<i>Pardosa septentrionalis</i> (Westring, 1861)	p							1m 39f	3f	2m	
<i>Pardosa sodalis</i> Holm, 1970	p										
<i>Pardosa</i> sp.	p			p							<i>Pardosa</i> sp. 1 or <i>Pardosa</i> sp. 3
<i>Pardosa</i> sp. (cf. <i>lapponica</i>)	N							49f			
<i>Pardosa sphagnicola</i> (F.Dahl, 1908)	p			8mf	76mf						
<i>Pardosa tesquorum</i> (Odenwall, 1901)	p										
<i>Pirata hygrophilus</i> (Thorell, 1872)	p		57f	9mf							
<i>Pirata insularis</i> Emerton, 1885	p			p							<i>P. piccolo</i> (F.Dahl, 1908)
<i>Pirata piraticus</i> (Clerck, 1757)	p			8mf		1m					
<i>Pirata piscatorius</i> (Clerck, 1757)	N			1f							
<i>Tricca alpigena</i> (Doleschall, 1852)	p				12mf				3f		
<i>Trochosa spinipalpis</i> (F.O.P.-Cambridge, 1895)	N				4mf						
<i>Trochosa terricola</i> Thorell, 1856	p			223mf							
<i>Xerolycosa nemoralis</i> (Westring, 1862)	p			1m							
MIMETIDAE (2)											
<i>Ero cambridgei</i> Kulczynski, 1911	N			3f							
<i>Ero furcata</i> (Villers, 1789)	p	1m	2mf	4mf		1f					
OXYOPIDAE (1)											
<i>Oxyopes ramosus</i> (Martini & Goeze, 1778)	p			p							
PHILODROMIDAE (6)											
<i>Philodromus alascensis</i> Keyserling, 1884	p										
<i>Philodromus cespitum</i> (Walckenaer, 1902)	p			3mf							
<i>Philodromus fuscomarginatus</i> (De Geer, 1778)	p			1f							

Table 1 (contituing).
Таблица 1 (продолжение).

	MS	Peredvinsk 57°N 93,5°E	U.Pit 58°55'N 91°55'E	Mirnoye 62°19'N 89°02'E	Birobchana 62,45°N 91,5°E	Yelogui 62,5°N 87°E	Goroshykhа 66°N 87°E	Potapovo 68,50°N 86,25°E	Karaul 70°08'N 83°13'E	Vorontsovo 71,5°N 83°E	Comments and how species was listed in Eskov [1988]
THERIDIIDAE (continuing)											
<i>Euryopis flavomaculatus</i> (C.L.Koch, 1836)	p			1m		2m					
<i>Robertus arundineti</i> (O.P.-Cambridge, 1871)	p			p	3f						
<i>Robertus kastoni</i> Eskov, 1987	p										
<i>Robertus lividus</i> (Blackwall, 1836)	p	23mf	5mf	49mf	6mf	1m					
<i>Robertus lynifer</i> Holm, 1939	p										
<i>Robertus neglectus</i> (O.P.-Cambridge, 1871)	p			p							
<i>Robertus sibiricus</i> Eskov, 1987	p										
<i>Steatoda bipunctata</i> (Linnaeus, 1758)	N		1m								
<i>Theridion aurantium</i> Emerton, 1915	p	1m		2mf							
<i>Theridion impressum</i> L.Koch, 1881	p										
<i>Theridion ohlerti</i> Thorell, 1870	p			2mf							<i>T.o.</i> & <i>T.umbraticum</i> L.Koch, 1872
<i>Theridion pictum</i> Walckenaer, 1802	p			p							
<i>Theridion varians</i> Hahn, 1831	p			p							
<i>Thymoites bellissimum</i> (L.Koch, 1879)	p			p							
<i>Thymoites oleatus</i> (L.Koch, 1879)	p										
THOMISIDAE (19)											
<i>Coriarachne depressa</i> (C.L.Koch, 1837)	p			p							
<i>Misumena vatia</i> (Clerck, 1757)	p			p							
<i>Ozyptila arctica</i> Kulczynski, 1908	p							1f	1f		<i>Oxyptila a.</i>
<i>Ozyptila atomaria</i> (Panzer, 1801)	p			p							<i>Oxyptila a.</i>
<i>Ozyptila praticola</i> (C.L.Koch, 1837)	N		7mf	3mf							<i>Oxyptila p.</i>
<i>Ozyptila rauda</i> Simon, 1875	p			p							<i>Oxyptila r.</i>
<i>Ozyptila sincera</i> Kulczynski, 1926	p	1f	4m	127mf							<i>Oxyptila s.</i>
<i>Ozyptila trux</i> (Blackwall, 1846)	p		2m	9mf	13mf	23mf					<i>Oxyptila t.</i>
<i>Xysticus albidus</i> Grese, 1909	p			p						2mf	
<i>Xysticus audax</i> Thorell, 1875	p		2f	6mf							
<i>Xysticus britcheri</i> Gertsch, 1934	p			5mf	3mf	2m		13mf			
<i>Xysticus canadensis</i> Gertsch, 1934	p										
<i>Xysticus cristatus</i> (Clerck, 1757)	p										
<i>Xysticus lineatus</i> (Westring, 1851)	p			p							
<i>Xysticus luctuosus</i> (Blackwall, 1836)	N	1m		31mf							
<i>Xysticus obscurus</i> Collet, 1877	p			36mf	20mf		1m	1m			
<i>Xysticus sibiricus</i> Kulczynski, 1908	p										
<i>Xysticus ulmi</i> (Hahn, 1831)	p			p							
<i>Xysticus viduus</i> Kulczynski, 1898	p			18mf							
ZORIDAE (2)											
<i>Zora cf. nemoralis</i> (Blackwall, 1861)	N			124mf							
<i>Zora spinimana</i> (Sundevall, 1832)	p	3mf	4mf	91mf							

Poecilometes vakhanka Tanasevitch, 1989

COMMENTS. It is new both to Middle Siberia and Mirnoye. Previously its distribution was treated as NE Siberio-NW Nearctic boreal. It was known from north Cisokhotia and the upper Kolyma River in Asia [Marusik et al., 1992a; Eskov, 1994] and NW part of the Northwest Territories [Dondale et al., 1997] in the Nearctic. The new records extend its known range 60° to the west.

Porrhomma campbelli F.O. Pickard-Cambridge, 1894

COMMENTS. Previously this species was known from Europe only outside the former Soviet Union. This is a new record for Russia and Asia.

Scandichrestus tenuis (Holm, 1943)*

COMMENTS. It is new to Siberia. Previously *S. tenuis* was known only west of the Urals [Eskov, 1994].

Semljicola faustus (O. Pickard-Cambridge, 1900)

COMMENTS. Until recently it was known to be distributed only west of the Urals [Saaristo & Eskov, 1996]. Thus, the record from the Mirnoye Field Station is the first for Siberia and the easternmost point of its distribution.

Tenuiphantes alacris (Blackwall, 1853)

COMMENTS. It has a trans-Palaeartic range [Eskov, 1994], but was not previously found in Middle Siberia.

Tenuiphantes tenuis (Blackwall, 1852)

COMMENTS. Although it has a cosmopolitan distribution due to transport by man [Platnick, 2000], this is a new record for Siberia, and for Asia east of Tien-Shang (ca 75°E).

Walckenaeria alticeps (Denis, 1952)

COMMENTS. It has a West Palaeartic range [Mikhailov, 2000] and is new both to Middle Siberia and Mirnoye, which is the easternmost point of its distribution.

Walckenaeria koenboutjei Baert, 1994

COMMENTS. It is the first record of this species for both Middle Siberia and Mirnoye. This species was known to occur only in South Siberia, from Khakassia to southern Cisbaikalia (cf. Marusik et al., 2000), so the record from Goroshykha Vill. extends its known range a few degrees to the west and about 15° to the north.

LIOCRANIDAE (2)

Agroeca ornata Banks, 1892

COMMENTS. This species is new both to Middle Siberia and Mirnoye. Previously, *A. ornata* was known to occur in north Cisokhotia [Marusik et al., 1992a] and the Nearctic [from Alaska to Nova Scotia, southward to California and New Jersey [Dondale & Redner, 1982]. The new localities extend its known range about 60° westward, and more than 2° to the north (in Asia).

Agroeca proxima (O. Pickard-Cambridge, 1871)*

COMMENTS. This species is new to Siberia. It has a West Palaeartic distribution and ranges from Western Europe [Roberts, 1995] to the Yenisei River. The nearest known locality of *A. proxima* lies in the Middle Urals [Esyunin & Efimik, 1996]. The Yenisei record extends its range more than 4° northward; in Fennoscandia it is known northwards to 66°N [Koponen & Viramo 1998].

LYCOSIDAE (9)

Alopecosa aff. *pulverulenta* (Clerck, 1758)*

COMMENTS. Apparently this is a new species resembling *A. pulverulenta*. It is smaller than *A. pulverulenta*, and has striped femora and tibia III and IV.

Hygrolycosa rubrofasciata (Ohlert, 1865)

COMMENTS. It has a West Palaeartic distribution and ranges from Western Europe [Roberts, 1995] to the Yenisei River. The nearest known locality of *H. rubrofasciata* lies in Altai [Marusik et al., 1996]. The new record extends its known range about 3° to the east. The latitude of the new find coincides with the record from the Urals [Esyunin & Efimik, 1996].

Pardosa masurae Esyunin & Efimik, 1998

Figs. 5–10.

COMMENTS. Until recently this species was known only from the type locality (Orenburg Area). It seems that it has been previously reported from Mirnoye as *Pardosa* sp.4 by Eskov [1988], but the lack of Eskov's material does not allow us to confirm this suggestion. It is possible that the Yenisei population is not conspecific with that from Orenburg Area. This species belongs to the *saltuaria* group sensu Zyuzin [1979]. Because males of this group have very complicated bulb, especially terminal apophysis fused with conductor, and the *P. masurae* male was not properly illustrated, we give SEM figures of this species. Unlike other *Pardosa* species known to us, this species has embolus opening on the ventral side (Figs. 8–9). The embolus is rather short, relatively thick and not flattened. The tegular apophysis is typical for the species group.

Pardosa oksalai Marusik, Hippa & Koponen, 1996

COMMENTS. This species was known from the middle part of Siberia [Altai & West Sayan Mts, Marusik et al., 1996, 2000], but all previous records were below 53°N. The new record extends its known range about 10° to the north.

Pardosa oljunae Lobanova, 1978

COMMENTS. It has a West Siberian range and ranges from South Yamal southward to Altai, Tuva and northwestern Mongolia [Marusik et al., 2000]. In the Nizhnyaya Tunguska River valley this species is replaced by the sibling species *P. adustella* Roewer, 1951. This record fills a gap in the range of *P. oljunae* which was not previously known between the Polar Urals and Tuva.

Pardosa sp. (cf. *lapponica*)*

COMMENTS. This is apparently a new species belonging to the *lapponica* (Thorell, 1872) group sensu Zyuzin [1979]. 49 females of this species were found at Potapovo, as well as several dozens of specimens among Eskov's material from Middle Siberia identified as *P. lapponica*.

Pardosa sp.

COMMENTS. This is apparently a new species listed in Eskov [1988] as *Pardosa* sp. 2, and belonging to the *tesquorum* (Odenwall, 1901) group. It is known for us from the Yenisei River to the Lena River (Kronstedt & Marusik, personal data).

Pirata piscatorius (Clerck, 1758)

COMMENTS. Actually it is not a new species for Middle Siberia. It was already recorded from Podkamennaya Tungus-

ka by Holm [1973], but Eskov's [1988] check-list covered an area north of the Podkamennaya Tunguska River mouth and therefore this species was not listed. In any case this species is new to Mirnoye.

Trochosa spinipalpis (F.O. Pickard-Cambridge, 1895)

COMMENTS. This is a trans-Palaearctic species known from Europe to the Far East [Mikhailov, 1997]. Within Siberia it is known only from the southern parts.

MIMETIDAE (1)

Ero cambridgei Kulczyński, 1911*

COMMENTS. This is a trans-Palaearctic boreo-nemoral species ranging from Western Europe to Japan [Platnick, 2000]. The northern limit of its distribution is 65°N in Finland [Palmgren, 1974] and 62°20'N in Siberia. Previously it was not known from Russia east of the Urals.

THOMISIDAE (2)

Ozyptila praticola (C.L. Koch, 1837)

COMMENTS. It is new both to Middle Siberia and Mirnoye. This species is treated as having a Holarctic range [Platnick, 2000] but it seems to occur in Eurasia eastward only to the Yenisei River. The record of this species from Bratsk, Cisbaikalia [cf. Logunov & Marusik, 1994] is doubtful. In the Nearctic this species is known from two localities, and seems to be introduced [cf. Marusik et al., 1996].

Xysticus luctuosus (Blackwall, 1836)

COMMENTS. It has a circum-Holarctic boreo-nemoral range and occurs from Europe to Kamchatka, northward to north Cisokhotia [Marusik et al., 1992a], southward to Mongolia and Sakhalin [Marusik et al., 2000]. In the Nearctic this species occurs from the Northwest Territories to Quebec and southward to Oregon and Utah [Dondale & Redner, 1978]. The new record does not extend the known range of this species to the north in Siberia, because it is known from the North Urals [ca 62°N, Eshunin & Efimik, 1996].

ZORIDAE (1)

Zora cf. nemoralis (Blackwall, 1861)

COMMENTS. Apparently it is a species new to science. It was found from Tuva [Marusik et al., 2000] to northeast Siberia [Marusik et al., 1992a].

Species new to Mirnoye

CLUBIONIDAE

Clubiona pallidula (Clerck, 1758)

COMMENTS. It has a circum-Holarctic nemoral range and occurs in the north from Swedish Lapland and the Middle and South Urals along south and middle Siberia to Sakhalin and southward to Azerbaijan and Uzbekistan [Marusik et al., 2000]. In the Nearctic this species is known from coastal areas of British Columbia and Washington, and from Ontario [Dondale & Redner, 1982]. It has probably been introduced to North America. Within Middle Siberia it has erroneously been reported by Eskov [1988] from Nizhnyaya Tunguska [Mikhailov, 1992].

Clubiona subsultans Thorell, 1875

COMMENTS. It has Euro-Baikalian nemoral range and occurs from Europe to Mongolia [Marusik et al., 2000]. The record of this species from Japan is doubtful. The species has

been recorded from Lebed [62°05'N, Holm, 1973] near Mirnoye, but was not included in Eskov's [1988] check-list.

GNAPHOSIDAE

Micaria alpina L. Koch, 1872

COMMENTS. It has a subcircum-Holarctic boreo-hypolarctic range. In Siberia it occurs northeast to upper Amguema (67°N) and the Lena River delta (70°N), and southwest to Tuva [Marusik et al., 2000]. In the Nearctic it was recorded north of 55°N [Platnick & Dondale, 1992]. Within Middle Siberia it was known only from Taimura River [Eskov, 1988].

Micaria nivosa L. Koch, 1866

COMMENTS. This species has Euro-Baikalian nemoral range and occurs from Central Europe to Buryatia, north to northern Fennoscandia and Nizhnyaya Tunguska, and south to the East-Kazakhstan Area [Marusik et al., 2000].

HAHNIIDAE

Hahnina sibirica Marusik, Hippa & Koponen, 1996

COMMENTS. It has a trans-Siberian boreo-nemoral range and occurs from the Middle Urals to Nizhnyaya Tunguska and north Cisokhotia, and southward to Altai and Sakhalin [Marusik et al., 1996].

LINYPHIIDAE

Agyneta affinisoides (Tanasevitch, 1984)

COMMENTS. It is a Siberian hypoarcto-boreal species ranging from the Polar Urals southward to Uburkhangai, Mongolia, and northeast to the upper Kolyma River [Marusik et al., 2000].

Allomengea vidua (L. Koch, 1879)

COMMENTS. This circum-Holarctic species was known from the Lebed' River near Mirnoye [Eskov & Marusik, 1994] but never reported from the field station.

Anguliphantes cerinus (L. Koch, 1879)

COMMENTS. It has a west-middle Siberian boreal range and occurs from Novosibirsk and East-Kazakhstan Area to western Yakutia, north to the middle Yenisei River [ca 64°N, Eskov, 1988] and the upper Vilyuy River, and south to the East-Kazakhstan Area and Tuva [Marusik et al., 2000].

Bathypantes humilis (L. Koch, 1879)

COMMENTS. Although this species has a trans-Siberian range, it was not previously recorded from the Mirnoye Field Station.

Bathypantes reprobis Kulczyński, 1916

COMMENTS. It has a circum-Holarctic distribution [Eskov, 1994]. Within Middle Siberia *B. reprobis* has been reported from the Putorana Plateau [Eskov, 1988].

Drapetisca socialis (Sundevall, 1832)

COMMENTS. It has a trans-Palaearctic boreo-nemoral range [Eskov, 1994]. It was mentioned in Eskov's catalogue [Eskov, 1994] as a species occurring in Middle Siberia, but we were not able to locate any records. In any case *D. socialis* is new to Mirnoye.

Hilaira gibbosa Tanasevitch, 1982

COMMENTS. It has a wide Siberio-NW Nearctic range, occurring from the Polar Urals throughout Siberia to the Yukon Territory, north to the Putorana Plateau, and south-

ward to Tuva and Central Aimak [Marusik et al., 2000], but it has not yet been reported in areas between the Putorana Plateau and Tuva.

Mecynargus sphagnicola (Holm, 1939)

COMMENTS. It has a circum-Holarctic hypoarcto-boreal range and is known from Fennoscandia to the Polar Urals, Taimyr, through Evenkia [Eskov, 1988] to Tuva and Central Mongolia, and northeast to the Chukotka Peninsula [Eskov, 1994]. In the Nearctic it was found in the Yukon Territory, north-western Northwest Territories and Greenland [Dondale et al., 1997].

Pelecopsis dorniana Heimer, 1987

COMMENTS. It was known from Middle Siberia (Eskov, 1988) but not previously reported from Mirnoye.

Stemonyphantes conspersus (L. Koch, 1879)

COMMENTS. Although this species has been described from localities north and south of Mirnoye [cf. Holm, 1973] it was missing in Eskov's [1988] check-list. It has Euro-Baikalian boreo-nemoral range and occurs from Czechia to Cisbaikalia, north to the Polar Urals, and south to the East-Kazakhstan Area [Eskov, 1994].

Thyreostenius biovatus (O. Pickard-Cambridge, 1875)

COMMENTS. This species has a Eurasian distribution but was not previously found at the Mirnoye Field Station.

LYCOSIDAE

Alopecosa aculeata (Clerck, 1758)

COMMENTS. It has circum-Holarctic polyzonal range and is widely distributed in the East Palaearctic: from the Polar Urals and Xinjiang, Altai northward to Noril'sk and northeast to the Chukotka Peninsula, and south to Shandong [Marusik et al., 2000]. In the Nearctic this species is known from Alaska to Newfoundland, south to Arizona and Connecticut [Dondale et al., 1997]. Within Middle Siberia it was recorded from Noril'sk and Evenkia [Eskov, 1988].

Alopecosa albostrata (Grube, 1861)

COMMENTS. This species has a Siberian boreal range (from Yenisei River [Eskov, 1988] to the Lena River mouth and upper Kolyma River and south to east Tuva and Transbaikalia [Marusik et al., 1992a, 1993, 2000].

SALTICIDAE

Sitticus finschi (L. Koch, 1879)

COMMENTS. This species has a Siberio-West Nearctic boreal range [Logunov & Marusik, 2000]. Within Middle Siberia it was previously known only from Nizhnyaya Tunguska [Eskov, 1988].

THERIDIIDAE

Euryopis flavomaculata (C.L. Koch, 1836)

COMMENTS. This trans-Palaearctic species has been reported from near Mirnoye at Birochana and the Malaya Lebedyanka River [Eskov, 1988].

Species excluded from the list

ARANEIDAE

Araniella cucurbitina (Clerck, 1758)

COMMENTS. It seems that the record of Eskov [1988] in fact refers to misidentified *A. proxima* (Kulczyński, 1885)

known throughout the whole of Eurasia and northern North America. There are no records, substantiated by specimens, of *A. cucurbitina* in northern Asia east of the Urals.

GNAPHOSIDAE

Gnaphosa antipola Chamberlin, 1933

COMMENTS. The record of this Nearctic species from the Taimura River [Eskov, 1988] refers to *G. microps* Holm, 1939 (cf. Ovtsharenko & Marusik, 1988; Ovtsharenko et al., 1992).

Gnaphosa brumalis Thorell, 1875

COMMENTS. The record of this Nearctic species from the Taimura River [Eskov, 1988] refers to *G. chola* Ovtsharenko & Marusik, 1988 (cf. Ovtsharenko & Marusik, 1988; Ovtsharenko et al., 1992).

Zelotes subterraneus (C.L. Koch, 1833)

COMMENTS. All specimens from Middle Siberia examined belong to the sibling vicariating species *Z. fratris* Chamberlin, 1920.

LINYPHIIDAE

Agyreta mollis (O. Pickard-Cambridge, 1871)

COMMENTS. Study of specimens recorded by Eskov (1988) as *A. mollis*, proved that in fact he dealt with *A. affinis* (Kulczyński, 1898).

Erigonella hiemalis (Blackwall, 1841).

COMMENTS. Identification [Eskov, 1988] was corrected to *Araeoncus vorkutensis* Tanasevitch, 1984 [cf. Eskov, 1994].

Glyphesis cottonae (La Touche, 1946)

COMMENTS. It was found [cf. Marusik et al., 1993; Eskov, 1994] that all Siberian and Japanese records of this species in fact refer to an undescribed species.

Lepthyphantes whymperi F.O. Pickard-Cambridge, 1894

COMMENTS. The record of this species from Taimyr (Eskov, 1986) refers to *L. expunctus* (cf. Eskov, 1994).

Procerocybium sibiricum Eskov, 1989

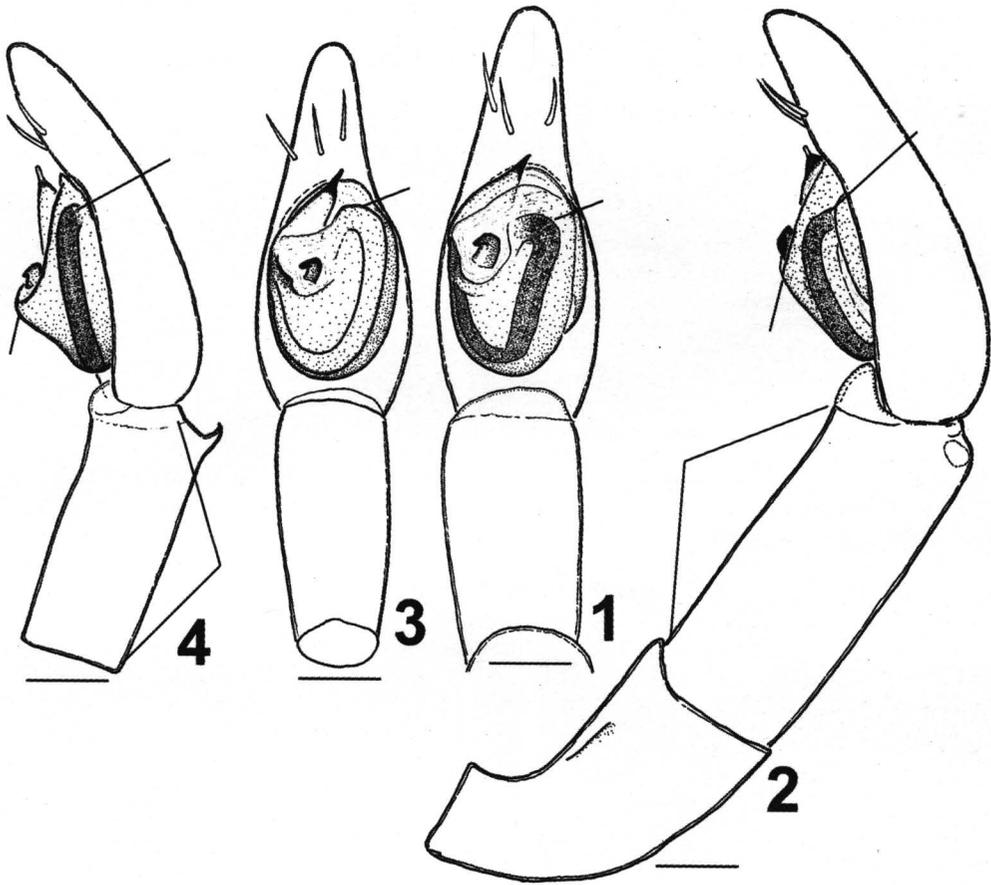
COMMENTS. Study of material from different parts of Siberia revealed the occurrence of three different species within the area (cf. Marusik & Koponen, 2001) and a new species, *P. jeniseicum* Marusik & Koponen, 2001 was erected for the Middle Siberian population.

Stemonyphantes lineatus (Linnaeus, 1758)

COMMENTS. There are some doubts about specific placement of the Yenisei population and the taxonomic status of two sibling Palaearctic species *S. lineatus* and *S. sibiricus* (Grube, 1861). In this paper we follow Eskov's [1994] treatment of this taxon in Middle Siberia and list *S. sibiricus*.

Walckenaeria clavicornis (Emerton, 1882)

COMMENTS. Efimik & Eshyunin [1996] showed that *W. clavicornis* occurs only in eastern Chukotka, while other parts of Siberia are inhabited by the sibling *W. korobeinikovi*. Study of new material proved that *W. clavicornis* is not present in Middle Siberia.



Figs. 1-4. Male palps of *Micaria yeniseica* sp.n. (1-2) and *M. silesiaca* L. Koch (3-4): 1, 3 — ventral view; 2, 4 — retrolateral view. Main differences are pointed. Scale = 0.1 mm

Рис. 1-4. Пальпы самцов *Micaria yeniseica* sp.n. (1-2) и *M. silesiaca* L. Koch (3-4): 1, 3 — вид снизу; 2, 4 — вид сбоку-сзади. Диагностические признаки указаны стрелками. Шкала 0,1 мм.

Walckenaeria mayumiae H. Saito, 1986

COMMENTS. The first record of this species from Middle Siberia [Eskov, 1988] was based on misidentification with *W. nodosa* O. Pickard-Cambridge, 1873 (cf. Eskov & Marusik, 1994).

Walckenaeria unicornis O. Pickard-Cambridge, 1861

COMMENTS. Study of specimens recorded by Eskov [1988] as *W. unicornis* from Middle Siberia, and of new material, proved that only the sibling species, *W. lepida* (Kulczyński, 1886) occurs there.

Philodromus aureolus (Clerck, 1758)

COMMENTS. It is clear that the record of Eskov [1988] refers to another species. There are no records, proven by specimens, of *P. aureolus* in northern Asia east of the Urals. The Middle Siberian specimen may belong either to *P. cespitum* (Walckenaer, 1802), *P. buxi* Simon, 1884 or *P. praedatus* O. Pickard-Cambridge, 1871.

Species description

Micaria yeniseica Marusik & Koponen, sp.n

Figs. 1-2.

Material examined: Holotype 1 ♂ (ZMMU), RUSSIA, Krasnoyarsk Province, Turukhansk Dist., middle Yenisei,

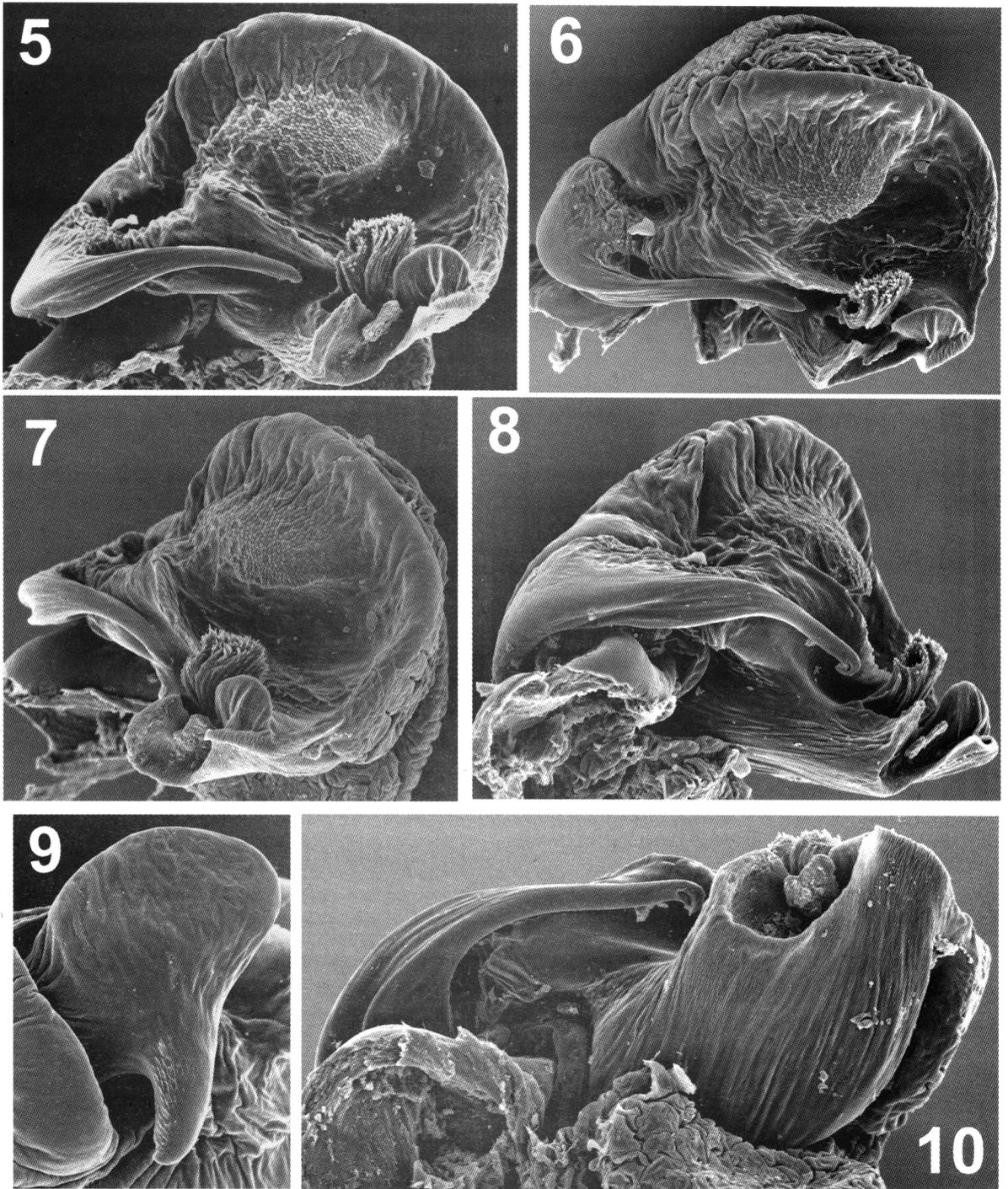
Mirnoye Vill, 62°19'N 89°02'E, young birch stand with Gramineae and other grass underneath, sample #159, pitfall traps, 9-19.06.1989 (L.B. Rybalov)

Comparative material: *Micaria silesiaca* L. Koch, 1875, 3 ♂♂ 2 ♀♀ (ZMUT), FINLAND, Nauvo, Lökhholm, pitfall traps, 1970 (P.T. Lehtinen).

ETYMOLOGY. The specific epithet derived from the type locality.

DESCRIPTION. Male. Total length 3.85 mm. Carapace: 1.86 long, 1.24 wide, length/width ratio 1.49. Coloration of the body exactly the same as in *M. silesiaca*. Abdomen black with pair of sublateral whitish spots formed with hairs in first 1/5 part of abdomen, and 3 spots lying transversely in the middle of abdomen. Legs I missing, and therefore carapace/tibia I, and tibia I/metatarsus I not known. Femur III with 2 dorsal spines and 1 retrolateral. Palp as in Figs. 1-2, with rather long and thick tibia. Tibial apophysis apparently broken. Upper loop of seminal duct coincides with position of median apophysis. Seminal duct makes strong turn in base of tegulum. Palpal cymbium/tibia ratio 1.125.

DIAGNOSIS. This new species is very close to *M. silesiaca*, from which can be separated by following characters: 1) palpal tibia length is almost subequal to cymbium, palpal cymbium/patella ratio 1.13 (1.45 in *M. silesiaca*), 2) upper loop of seminal duct is on the level of median apophysis (more distally in *M. silesiaca*), 3) seminal duct sharply turned in the base of tegulum (roundly turned in *M. silesiaca*), 4) seminal



Figs. 5–10. Bulbus parts of *Pardosa masurae* Esyunin & Efimik: 5–9 — different turns of apical terminal part, frontal, apical, retrolateral, and ventral views; 10 — tegular apophysis.

Рис. 5–10. Строение бульбуса *Pardosa masurae* Esyunin & Efimik: 5–9 — разные виды верхней части бульбуса, вид спереди, сверху, сбоку-сзади и снизу; 10 — тегулярный отросток.

duct widely separated, by about one diameter, from the retrolateral edge of tegulum (narrowly separated, by less than one diameter in *M. silesiaca*), 5) femur III with 2 dorsal and 1 retrolateral spines (3 dorsal, 1 pro- and 1 retrolateral in *M. silesiaca*).

DISTRIBUTION. Known only from the type locality. It is

possible that this species occurs in Western Siberia and Transbaikalia from where *M. silesiaca* has been reported [2?, sub *M. hospes* Kulczyński, 1882, Ermolajev, 1934; Danilov & Kurtova, 1991; Danilov, 1993]. At our request S. Esyunin checked all specimens collected from the Urals and identified them as *M. silesiaca*. All males studied by him belong to true *M. silesiaca*.

Table 2. Structure of 9 well studied spider faunas of northern Eurasia (species-poor families not included).
 Таблица 2. Структура 9 наиболее изученных аранеофаун северной Евразии (семейства с малым числом видов опущены).

	Finland	%	Altai	%	Middle Siberia	%	Tuva	%	Mongolia	%	Yakutia	%	Magadan	%	Alaska	%	Yukon	%
Araneidae	31	5	18	6	16	3	30	5	34	6	18	4	20	4	15	4	16	5
Clubionidae	17	3	9	3	11	2	13	2	13	2	8	2	11	2	11	3	9	3
Dictynidae	16	3	6	2	8	2	20	3	13	2	13	3	16	3	9	3	9	3
Gnaphosidae	42	7	37	13	22	4	72	12	89	16	33	8	31	6	19	6	23	8
Hahniidae	7	1	2	1	5	1	2	0	1	0	1	0	4	1	7	2	4	1
Linyphiidae	282	45	96	34	305	61	223	36	185	34	193	47	333	60	175	52	140	46
Liocranidae	10	2	2	1	4	1	3	0	5	1	1	0	2	0	2	1	1	0
Lycosidae	48	8	26	9	50	10	56	9	60	11	39	10	37	7	36	11	33	11
Philodromidae	15	2	12	4	6	2	31	5	30	5	20	5	17	3	9	3	14	5
Salticidae	40	6	24	9	20	4	62	10	68	12	29	7	29	5	8	2	13	4
Tetragnathidae	15	2	7	3	6	1	9	1	9	2	5	1	7	1	8	2	4	1
Theridiidae	43	7	20	7	16	3	37	6	25	5	18	4	26	5	12	4	14	5
Thomisidae	26	4	18	6	19	4	40	6	42	8	25	6	18	3	14	4	18	6
Total number	624	95	307	99	496	98	620	96	549		408	99	545	99	339	96	304	98

Discussion

In comparison to the previously published check-list [Eskov, 1988] the known spider fauna of the Middle Siberia has been increased from 427 to 496 species, and the fauna of the Mirnoye Field Station from 251 to 283 species. Fourteen species have been excluded from the previous check-list. The increase in the number of species from Middle Siberia is only partially caused by the enlargement of area. Only two additional species have been found between 57°N and Mirnoye Field Station, namely *Paracoelotes birulai* and *Trochosa spinipalpis*. All other species new to the Middle Siberia or even to Siberia as whole, come from the latitudes north of 62°. Some of the growth in species numbers is a result of several revisional studies by Eskov, and other Russian and foreign colleagues. Nevertheless, much of the growth of the known species richness comes from the new material studied.

By species diversity, the Middle Siberian fauna is the third largest known fauna east of the Urals (after Tuva and northeast Siberia) (see Table 2 and cf Marusik et al., 2000). Comparison of species composition between the fauna of the Middle Siberia and other northern faunas such as Finland (54% species in common), Altai (50%), Mongolia (35%), northeast Asia (61%), Yakutia (62%) and Tuva (55%) revealed that the level of similarity is evidently higher between Middle Siberia and other boreo-arctic faunas (Yakutia, NE Asia, Finland) than between closely situated more southern faunas (Altai, Mongolia, Tuva). Among boreo-arctic faunas similarity seems to be a function of distance: highest similarity with adjacent Yakutia (62%), slightly lower with northeast Siberia (61%) separated by 30°, and 54% similarity with far separated Finland (50° west of Middle Siberia).

The structure of faunas lying in south Siberia and Mongolia, and in the boreo-arctic zone are shown in the Table 2. The fauna of the Middle Siberia has higher value of linyphiids (61%), while values of such families as Araneidae (3%), Dictynidae (2%), Gnaphosidae (4%), Theridiidae (3%), Thomisidae (4%) are smallest among all species-rich families. While it seems that the level of study of Linyphiidae is rather high due to special interest to this family by collectors such as K. Yu. Eskov, A. B. Ryvkin and some others, and total number of species well reflects their real diversity. Small number and value of gnaphosids and thomisids is most probably is caused by limited usage of pitfall trapping, and poorness of dictynids, theridiids and araneids reflects small usage of sweeping. Judging by the general distribution and fauna of the adjacent regions, the occurrence of the some additional species in Middle Siberia is very probable, such as of Araneidae as: *Araneus marmoreus* Clerck, 1758, *A. saevus* (L. Koch, 1872), *Hyposinga pygmaea* (Sundevall, 1872), *H. sanguinea* (C.L. Koch, 1844), *Zygiella stroemi* (Thorell, 1870), Dictynidae: *Dictyna alaska* Chamberlin & Ivie, 1947, *D. cf. schmidtii* Kulczyński, 1926, *D. tyshchenkoi* Marusik, 1988, *Emblyna annulipes* (Blackwall, 1834), *Lathys* sp., Gnaphosidae: *Drassodes cupreus* (Blackwall, 1834), *D. neglectus* (Keyserling, 1887), *Gnaphosa nigerrima* (L. Koch, 1877), *Micaria guttulata* (C.L. Koch, 1839), *M. rossica* Thorell, 1875, Theridiidae: *Euryopsis saukea* Levi, 1951, *Steatoda albomaculata* (De Geer, 1778), *S. grossa* (C.L. Koch, 1838), *S. castanea* (Clerck, 1758), *Theridion sibiricum* Marusik, 1988, Thomisidae: *Ozyptila orientalis* Kulczyński, 1926, *Xysticus austrosibiricus* Logunov & Marusik, 1998, *X. baltistanus* Caporiacco, 1935, *X. bifasciatus* C.L. Koch, 1837, *X. emertoni* Keyserling, 1880, *X. vachoni* Schenkel, 1963. Some

Table 3. Structure of 8 best studied local spider faunas in boreal zone (only species-rich families are shown, % rounded to the integer).

Таблица 3. Структура 8 наиболее изученных локальных аранеофаун бореальной зоны (показаны семейства только с большим числом видов, % округлены до целых чисел).

	Tvar- minne, 60°N	%	Nizhne- svirski, 60°50'N	%	Manty- harju, 61°15'N	%	Kivach, 62° 18'N	%	Mirnoye, 62°19'N	%	Abori- gen, 62°N	%	Kuusa- mo, 66°N	%	Kevo, 69° 45'N	%
Araneidae	20	5	24	7	20	6	17	6	10	4	16	4	13	5	11	6
Clubionidae	17	4	12	3	9	3	7	3	9	3	7	2	5	2	4	2
Dictynidae	4	1	8	2	5	2	3	1	6	2	10	3	4	2	4	2
Gnaphosidae	28	7	28	8	21	5	19	7	15	6	30	8	10	4	10	6
Hahniidae	6	1	4	1	5	2	4	1	5	2	2	1	5	2	2	1
Linyphiidae	176	41	141	40	145	46	129	47	160	57	198	55	135	56	98	59
Liocranidae	5	1	6	2	4	1	4	1	4	1	1	0	2	1	0	0
Lycosidae	37	9	35	10	24	8	25	9	23	9	24	7	20	8	14	8
Philodromidae	14	3	9	3	8	3	6	2	3	1	10	3	4	2	4	2
Salticidae	33	8	22	6	16	5	14	5	11	4	25	7	9	4	3	2
Tetragnathidae	11	3	12	3	9	3	8	3	5	2	2	1	2	1	1	1
Theridiidae	32	8	21	6	24	6	19	7	9	3	13	4	12	5	5	3
Thomisidae	17	4	18	5	15	5	9	3	15	6	12	3	11	5	5	3
Total number	425		354		315		275		283		357		240		165	

enrichment of the fauna can be achieved by more detailed study of Salticidae and Philodromidae as well.

There are several peculiarities in the Mirnoye fauna. They are as follows: 1) the genus *Gnaphosa* is almost lacking, only 1 species in comparison to 8 in the Aborigen Field Station, or 4 in the Kivach reserve; 2) highest diversity of *Agroeca* in Siberia, 4 species in comparison to two species for all of northeast Siberia, or one species in Yakutia, 3) lack of *Thanatus* and only two species of *Philodromus* (6 and 4 species in the Aborigen Field Station, respectively), 4) poor diversity of Salticidae, 11 species *contra* 22 in the Aborigen Field Station.

Data on variation of the percentage of each family in different faunas are summarised in the Table 4. Two of 8 local faunas compared lie outside of the real boreal zone. Tvarminne is situated in hemiboreal (or subboreal) zone, an intermediate belt between the boreal and nemoral zones, and Kevo Station is located in the subarctic zone (transitional between boreal and tundra zones). Therefore these two faunas show extreme numbers of species richness, 425 and 165 respectively. At the same time the number of species in 6 other faunas ranges from 240 (rather northern fauna) to 357.

In the absolute figures the difference between the highest and lowest value is smallest among Hahniidae and Philodromidae, while the relative range of the value is smallest in Lycosidae and Linyphiidae (1.42–1.48). Small variation of value in these families between different and distant local faunas means that species richness of Lycosidae, Linyphiidae and Philodromidae can be used as a good indicator of the whole spider species diversity in certain fauna. But if to compare these 3

Table 4. % range of species-rich families within local boreal faunas and ratio (highest/lowest value).

Таблица 4. Вариация доли наиболее крупных семейств в разных локальных фаунах бореальной зоны.

Araneidae	4–7	1.75
Clubionidae	2–4	2
Dictynidae	1–3	3
Gnaphosidae	4–8	2
Hahniidae	1–2	2
Linyphiidae	40–59	1.48
Lycosidae	7–10	1.42
Philodromidae	1–3	3
Salticidae	2–8	4
Tetragnathidae	1–3	3
Theridiidae	3–8	2.7
Thomisidae	3–6	2

families in relation to 1) absolute richness, 2) required collecting methods, 3) difficulties in identification (or just counting species richness) it is clear that only wolf spiders (Lycosidae) can be used as a good indicator. Linyphiidae is a species rich family comprising more than 100 species in each local fauna, species live in all range of microhabitats and therefore species survey require different collecting methods (pitfall trapping, sifting litter, sweeping, hand picking, etc.). Besides these obstacles, identification of linyphiids requires much experience and is very time consuming. Lycosidae

has more species than other families, but much less than Linyphiidae, and at the same time are easy to collect and identify. Species richness of wolf spiders can be rather easily revealed by using pitfall traps placed in different biotopes (habitats).

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