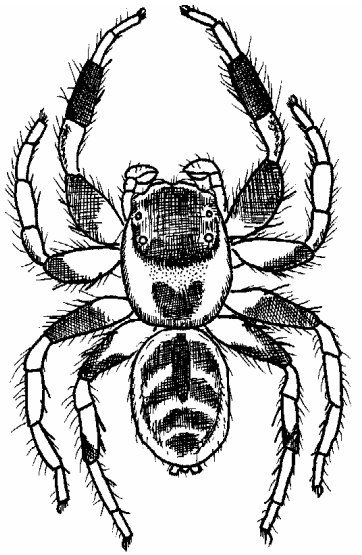
Yu.M. Marusik, D.V. Logunov,
S. Koponen

SPIDERS OF TUVA, SOUTH SIBERIA



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ПАУКИ ТУВЫ, ЮЖНАЯ СИБИРЬ

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This book comprises a check list of the Tuvan spiders, including 614 species from 23 families. Detailed information about identification sources and distribution, both inside and outside Tuva, is given for each species. Ranges of most species are shown on maps. Biogeographical analysis (spatial & geographical distribution, species richness and species similarity with several Holarctic faunas) of the Tuvan spider fauna is performed. The taxonomic status of some species is discussed and some new synonymies are proposed.

Destinated for zoologists, mainly entomologists and arachnologists, as well as for biogeographists.

Ills. 21. Tbl. 7. Maps 218. Refs. 284.

Keywords: spiders, Araneae, Siberia, Tuva, biogeography.

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Настоящая книга представляет собой каталог пауков (614 видов), обитающих в Туве. Для каждого вида приведены подробные данные о распространении в Туве и за ее пределами. Для ряда видов даны таксономические замечания. Ареалы большинства видов изображены на картах. Детальный зоогеографический обзор включает анализ ландшафтного и географического распространения, аранеофауна Тувы сравнивается с другими Голарктическими фаунами.

Для зоологов, арахнологов, биогеографов и краеведов.

Ил. 21. Табл. 7. Карт 218. Библ. 284.

Ключевые слова: пауки, Araneae, Сибирь, Тува, биогеография

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Dedicated to Heli Hurme
Хели Хурме посвящяется
Omistettu Heli Hurmeelle

1. Introduction

Tuva is a small administrative unit of Russia in South Siberia covering approximately 170 thousand sq. km (see map). It is a mountainous region, with elevations ranging from 650 m in the Tuvan hollow to 3970 m at the summit of Mongun-Taiga Mountain. Despite its small size, Tuva encompasses an extremely wide range of landscapes and vegetation types. In some parts of southwestern Tuva natural zones ranging from semi-desert and dry steppe to *Larix*-taiga and mountain tundra occur within a distance of 50-60 km.

This highly diverse land remained largely unexplored with regard to it's spider fauna until 1989, when one of us (DL) began to study Tuvan spiders. Before that, only two species, *Pardosa lusisi* and *Yllenus mongolicus*, were known to occur in Tuva (Šternbergs, 1981, Prószyński, 1982). Since then, radical progress in the treatment of the spiders in Tuva has been made and more than 50 papers, including check-list of 605 species (Logunov et al., 1998), have been published. In the present book (*) 614 species found so far in Tuva are listed.

The present book is thus an up-to-date review of the spider fauna in Tuva. It is based primarily on our recent check-list (Logunov et al., 1998), but supplies data on several additional species, detailed notes and maps indicating the distribution of each species outside of Tuva, and a more detailed zoogeographical analysis.

1.1 Structure of species survey

Name. All taxa are presented here in alphabetical order. An asterisk (*) prior to a binomen means that the species is new to the fauna of Tuva and/or to the list published in 1998 (Logunov et al., 1998). Two asterisks (**) designate a first record for the Russian fauna.

Reference to illustrations. Below each species heading a reference to an appropriate or sometimes to the only existing illustration of this species is given in square brackets [ ]. We tried, where possible, to use illustrations from well known sources such as identification books (Roberts, 1987, 1995; Heimer & Nentwig, 1992) or revisions (e.g. Wesołowska, 1986; Ovtsharenko et al., 1992, etc), but for many East Palaearctic species good drawings can be found only in small revisions and reviews. To avoid the necessity for **Comments** about combinations or even the specific name used for species in each paper we list only figure numbers. Where drawings were not numbered (e.g. Roberts, 1995) only the page number is given. References for drawings were given because one of the greatest difficulties in the study of an area so vast and diverse in species as Siberia is the lack of an identification book. At the present time illustrations of Siberian species are scattered through hundreds of publications.

Distribution. References to illustrations are followed by the range name and a description of the range. Each range name includes an indication of the geographical sector (e.g. Palaearctic, Euro-Baikalian, etc.) and the biogeographic zone to which it belongs (e.g.

boreal, boreo-nemoral, etc). Indications of zonal placement for species endemic to south Siberia are omitted in most cases. Distributional terms are explained below. After the range name, a detailed description of the range is given indicating the western, eastern, northern and southern limits of the distribution. Most attention was given to distributional limits within Siberia and Fennoscandia

Comments. Following the distributional data, for some species we give **Comments** on taxonomy and/or habitat preference or other biological data.

New localities. For a few species new data about distribution within Tuva was obtained after publication of the check-list (Logunov et al., 1998). We list this data under "New locality" or "New localities".

Citation of the earlier check-list. Each species survey is concluded by an exact citation of the check-list (Logunov et al., 1998) devoted to this species. This citation is given to show what combinations we used in earlier papers, from what localities the species was known, who recorded the species from an exact locality (underlined) and also abbreviated habitats in which the species was found (see list below). If a species has already been reported from Tuva, corresponding locality numbers are underlined. Fourteen species of spiders new to Russia and, consequently, not reported in the recent catalogue of the ex-USSR spiders (Mikhailov, 1997), are marked with an asterisk. The species marked with "?" refer to preliminary determinations; in most cases we need comparative material to check identifications. The question marks "?" among/instead of vegetation type abbreviations mean that data on the habitat preferences of a species are absent or poorly known.

Maps. To supplement the written range descriptions maps are provided for almost all the species. Range outlines are based on extreme distributional records in Siberia, and are approximated for western Europe and the southern Holarctic.

1.2. Material

The check-list is based on material collected by authors during field trips to Tuva in 1989-1996. The material dealt with here has been shared mostly between the collections of the Institute for Systematics and Ecology of Animals (Novosibirsk, Russia), the Zoological Museum of the Moscow State University (Moscow, Russia), the Institute for Biological Problems of the North (Magadan, Russia), the Zoological Museum of the University of Turku (Turku, Finland) and the California Academy of Sciences (San Francisco, USA). In the list of localities (see below), names of collectors are abbreviated as follows: DL = D.V. Logunov; OL = O.V. Lyakhov; YM = Yu.M. Marusik; SK = S. Koponen.

Of the 614 spider species listed below, over 80 have already been described by us or our colleagues during the last 10 years, while more than 60 species are either undescribed, *e.g*. *Talavera* sp. 1 (*cf. petrensis*), *Gnaphosa cf. orites*, *etc*., or are of an obscure status. All these species are listed here as undetermined ones with reference, if possible, to their closest relatives.

1.3. Spatial distribution

Of the vegetation types prevailing in Tuva (see Kuminova *et al*., 1985, Namzalov & Korolyuk, 1991), we have been able to analyze, with regard to the arachnofauna, 23 formations (see below).

The similarity of spider communities was studied using the Czekanowski-Soerensen index (Ics).

The chorological analysis has been performed in terms of the so-called landscape-typology approach (Pravdin, 1978; Pravdin & Mishenko, 1980). Three main parameters of spider biodiversity throughout the studied ecosystems (vegetation types and landscapes) have been estimated: (1) the general level of biodiversity, *i.e*. the number of spider species; (2) the taxonomic pattern, *i.e*. the composition of taxa; and (3) the taxonomic originality, *i.e*. the proportion of exclusive (indicator) species compared to the whole number of species found. In addition, clustering of the studied spider communities within 23 vegetation types has been performed using the program BIODIV (Baev & Penev, 1991). The terms used are as follows:

1. The taxonomic index (TI), used in the geobotanical literature and first adopted for zoogeographic purposes by Medvedev (1984), reflects to taxonomic specificity of a particular spider faunula (fauna of a segregated habitat), *i.e*. a set of dominating taxa. The spider families (usually ca. 3) that form a half (50%) or more of the species in an entire fauna/faunula are included in the TI. For instance, the families Linyphiidae and Lycosidae comprise together 61% of the spider community of the mountain tundra landscape (Fig. 6.4) and hence the TI is Lin-Lyc.

2. Vegetation type is used *sensu stricto* and adopted from Namzalov & Korolyuk (1991).

3. Exclusive (indicator) species are those restricted to a particular ecosystem (vegetation type or landscape). The proportion of these species is used to indicate the taxonomic originality of an ecosystem (vegetation type or landscape).

4. The index of originality (IO) is counted in a similar way to the taxonomic index, showing spider families contributing 50 % or more of the total number of exclusive (indicator) species in a particular ecosystem (*cf*. Figs. 6.4-5 and Table 7).

1.4. Geographical distribution

Information about distribution of species within Siberia and Fennoscandia was taken from numerous publications indicated in the text, and our unpublished data. Ranges of North American species are well documented in several revisions and identification books devoted to Nearctic fauna. Data on distribution of spiders in Europe, especially southern, are not so precise as from Asia and Nearctic because distributional data are dispersed through many catalogues and check-lists. Name of the ranges were given after the system suggested by Gorodkov (1984).

Distributional terms are defined as follows: Mongolian - Mongolia and adjacent areas such as Tuva, Altai, East-Kazakhstan Area, NE Xinjiang, Buryatia, Chita Area, Inner Mongolia and parts of Gansu; Euro-Tuvan means that species are known from Europe to South Siberia eastward to Tuva, and, similarly, Euro-Yenisei means than in Siberia the species is known in areas north of Tuva too; Euro-Baikalian means that the species is distributed from Europe to Cis- or Transbaikalia; Manchuria - area east of Transbaikalia and south of Amur River (SE Siberia, Maritime Prov., South Sakhalin and Kuriles, Japan, NE China and Korea).

Prefix "trans-" means that species occurs throughout the whole area; hypoarctic means

that species is known from southern tundra to Tuvan highlands (mountain tundra chiefly); boreal - species restricted to boreal (coniferous forest=taiga) zone; nemoral - species living south of boreal zone and chiefly associated with nemoral (=temperate) (mixed and deciduous forests) zone; many species restricted to steppe biotopes and intrazonal habitats are attributed to this group too.

Distributional data outside the former USSR, Mongolia and northern North America were compiled critically, and not just by rewriting existing descriptions of the range given, for example, by Prószyński & Staręga (1971) or Esyunin & Efimik (1996), who list many species from the Far East which do not actually occur there.

1.5. List of localities (see Fig. 1.1)

01. Tanzybei environs, Forest Research Station and Mutnaya River, 380-400 m a.s.l., 53°08'N 92°53'E (26.06-12.07.1990, DL; 2-3.06.1995, YM & SK).
02. West Sayany Mts, Oiskiy Mt. Range, Oiskiy Pass and Oiskoye Lake, 52°51'N 93°15'E, 1500-1700 m a.s.l. (12.07.1990, DL & V. G. Mordkovitch; 3-21.06.1995, YM).
03. West Sayany Mts, Oiskiy Mt. Range, 8-10 km S of Oiskoye Lake, Olenia Rechka River, 52°48'N 93°12'E, 1400-1900 m a.s.l. (27.06-11.07.1990, DL; O8.07.1993, DL).
04. West Sayany Mts., Oiskiy Mt. Range, Buiba Riv., 52°47'N 93°18'E, 1230 m a.s.l. (20-21.06.1995, YM & SK).
05. West Sayany Mts, 2-3 km N of Aradan, Belyi Us River Valley, 52°36'N 93°27'E, 840-850 m a.s.l. (8-9.07.1990, DL).
06. Toora-Khem environs, 52°29'N 96°07'E, 850-870 m a.s.l. (18-23.06.1989, DL).
07. NW bank of Azas Lake, 52°24'N 96°28'E, 850-900 m a.s.l. (19-23.06.1989, DL).
07a. Serlig-Khem River (basin of Biy-Khem River), ca. 8 km upstream of mouth, 52°08'N 96°55'E (11.06.1992, A.B.Ryvkin).
08. West Sayany Mts, Kurtushibinskiy Mt. Range, ca 10 km NW of Shivilig, 52°14'N 93°28'E, 1100-1300 m a.s.l. (5-7.06.1990, DL).
08a. Turan environs, 52°09'N 93°57'E (summer 1984, A.B.Ryvkin).
09. Uyuk River mouth, 52°04'N 94°22'E, 600-700 m a.s.l. (21-23.05.1989, DL; 3-5.06.1995, YM).
10. 4-5 km N of Cherbi, 51°55'N 94°37'E, 850-1000 m a.s.l. (1.07.1990, DL).
11. Seserlig environs (5-10 km NW and SE), 51°54'N 94°11'E, 1100-1500 m a.s.l. (24-25.07.1989, DL; 2.05-29.06.1990, DL).
12. 3-5 km N of Kyzyl, 650-900 m a.s.l., 51°46'N 94°27'E, (20.05-21.09.1989, DL; 1.05-1.07.1990, DL, OL & V. K. Zinchenko; 6-20.06.1995, YM & SK; 18.06-24.07.1996, YM).
13. ca 20 km S of Balgazyn, 6-10 km N of Shuurmak, 51°45'N 95°17'E, 1000 m a.s.l. (7.07.1989, DL).
14. 15-30 km E of Kyzyl, Kaa-Khem (Riv.), 51°43'N 94°42'E, 700-1200 m a.s.l. (30.06.1990, DL; 16-18.06.1996, YM).
15. 33-35 km E of Kyzyl, ca 5 km N of Sug-Bazhi, 51°40'N 94°53'E, 900 m a.s.l. (30.06.1990, DL).
16. ca 65 km W of Kyzyl, Otuk-Dash Stand, 51°35'N 93°39'E, 700-800 m a.s.l. (10.05.1990, DL).

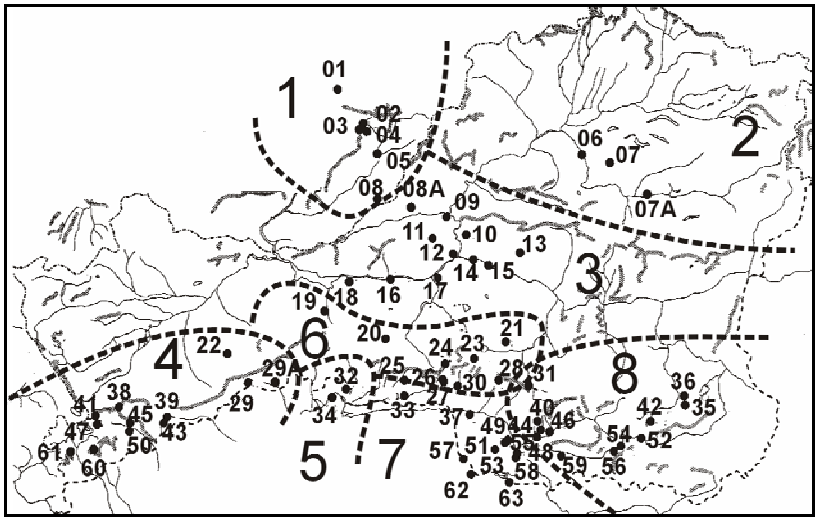

Fig. 1.1. Collecting localities

17. 6-7 km WSW of Kyzyl, Yenisei River Valley, Agricultural Res. Station, 51°35'N 94°15'E, 650-700 m a.s.l. (25.05-24.07.1989, DL; 27.05-1.07.1990, DL).
18. 5-7 km E of Shagonar, Khaiyrakan Mt., 51°34'N 93°08'E (10.05.1990, DL).
19. 10-25 km SSW of Shagonar, Torgalyg environs, 51°20'N 92°50'E, 900-1200 m a.s.l. (8-10.05.1990, DL).
20. 1-5 km WSW of Khovu-Aksy, Elegest River Valley, 51°07'N 93°36'E, 1000 m a.s.l. (4-5.05.1990, DL & V. K. Zinchenko).
21. ca 90 km SE of Kyzyl, 3-7 km N of Balgazyn, 51°04'N 95°04'E (19.07.1993, DL; 6.06.1995, YM, SK & DL; 20.06.1996, YM).
22. 24-25 km N of Khandagaity, West Tannu-Ola Mt. Range, 50°59'N 91°38'E (17-26.07.1993, DL).
23. 1-2 km S and SE of Chagytai Lake, northern foothills of East Tannu-Ola Mt. Range, 50°57'N 94°41'E, 1050-1800 m a.s.l. (26.06-2.07.1989, DL).
24. ca 30 km NW of Khol'-Oozhu, East Tannu-Ola Mt. Range, Kara-Khol' Lake, 50°55'N 94°20'E, 1700-1750 m a.s.l. (9.07.1989, DL).
25. ca 20 km N of Oo-Shinaa, 3-4 km E of Despen, 50°48'N 93°50'E, 1600 m a.s.l. (17.07.1989, DL).
26. East Tannu-Ola Mt. Range, 20 km NE of Khol'-Oozhu, Kangai-Kyry Mt., 50°48'N, 94°18'E, 2100 m a.s.l. (12.07.1989, DL; 8-17.06.1995, YM, SK & DL).
27. East Tannu-Ola Mt. Range, 8-10 km NE of Khol'-Oozhu, Belengishch Stand, 50°47'N, 94°19'E, 1700-1800 m a.s.l. (9-11.07.1989, DL; 16.07.1995, YM, SK & DL).
28. ca 1.5 km W of Samagaltai, 50°47'N 94°58'E (14.07.1993, DL).
29. 13-15 km N of Khandagaity, Kham-Dag River, 50°46'N 91°55'E (25-26.07.1993, DL).

29a. ca 15 km E of Khandagaity, Ulatai River Valley, 1000-1100 m a.s.l., 50°45'N 92°15'E (11-12.06.1989, DL).
30. East Tannu-Ola Mt. Range, ca 5 km E of Khol'-Oozhu, Aryskannyg-Khem River Canyon, 50°45'N 94°29'E, 1200-1350 m a.s.l. (8-9.07.1989, DL; 16.07.1993, DL; 16-18.06.1995, YM, SK & DL).
31. ca 8 km E of Samagaltai, 6-10 km W of Shuurmak, W parts of Khorumnug-Taiga Mt. Range, 50°44'N 95°19'E, ~1100 m a.s.l. (10.07.1993, DL; 20.06-18.07.1996, YM & D. V. Obydov).
32. 40-45 km W of Ak-Tsyraa, Irbitei River valley, 50°44'N 93°08'E, 1000-1200 m a.s.l. (18-19.07.1993, DL; 13-16.06.1995, YM).
33. ca 15 km E of Oo-Shinaa, 50°41'N 93°50'E, (17-19.07.1993, DL).
34. NE bank of Ubsunur (Uvs) Lake, 50°40'N 92°58'E, 760 m a.s.l. (12.06.1989, DL; 18.07.1993, DL; 14.6.1995, DL & YM).
35. Sangelen Mt. Range, the middle reaches of Kargy River, 50°31'N 97°03'E, 1300-1400 m a.s.l. (28-30.06.1996, YM).
36. Sangelen Mt. Range, the middle reaches of Kargy River, 50°35'N 97°05'E, 1300-1300 m a.s.l. (2-4.07.1996, YM).
37. ca 8 km W of Ak-Erik, Tes-Khem River Valley, 50°32'N 94°37'E (June 1990, OL).
38. ca 3 km NE of Sagly, 50°31'N 90°20'E (24.07.1993, DL).
39. 20-25 km W of Sagly, the upper reaches of Onachy River, 50°28'N 90°57'E, 1500-1600 m a.s.l. (13.06.1989, DL; 24.07.1993, DL).
40. Sangelen Mt. Range, the upper reaches of Dzhen-Aryk (Ck), 50°28'N 95°24'E, 1750-2030 m a.s.l. (16-18.07.1996, YM).
41. 40-45 km W of Mugur-Aksy, the upper reaches of Kargy River, 50°26'N 90°03'E, 2200-2300 m a.s.l. (17-18.05.1990, DL).
42. Sangelen Mt. Range, the upper reaches of Kargy River, 50°25'N 96°41'E, 2230 a.s.l. (28.06-4.07.1996, YM & D. V. Obydov).
43. Tsagan-Shibetu Mt. Range, Barlyk River Valley, confluence with Onachy River, 50°25'N 90°55'E, 2000-2100 m a.s.l. (13.06.1989, DL; 6.06.1990, OL).
44. Sangelen Mt. Range, the middle reaches of Dzhen-Aryk (Ck), 50°24'N 95°26'E, 1450 m a.s.l. (14-16.07.1996, YM).
45. 8-9 km NE of Mugur-Aksy, the upper reaches of Kuge-Davaa River, Tsagan-Shibetu Mt. Range, 50°24'N 90°30'E, 2100-2700 m a.s.l. (10-19.05.1990, DL).
46. 30-35 km NWW of Erzin, confluence of Ular-Khem and Erzin Rivers, 50°23'N 95°32'E, 1200-1300 m a.s.l. (11-12.06.1989, DL).
47. 30-35 km SW of Mugur-Aksy, the upper reaches of Mugur River, Mongun-Taiga Mt., 50°22'N 90°05'E, 3100-3300 m a.s.l. (23.07.1993, DL).
48. Sangelen Mt. Range, Moren environs, 50°21'N 95°23'E, 1150 m a.s.l. (14-18.07.1996, D. V. Obydov).
49. ca 20 km NW of Erzin, Tes-Khem River Valley, 50°20'N 95°03'E, 900-1000 m a.s.l. (31.05.1989, DL; 8-10.06.1995, YM & SK).
50. 3-10 km SE of Mugur-Aksy, Kargy River Canyon, 50°20'N 90°30'E, 1800-1850 m a.s.l. (14.06.1989, DL; 16-20.05.1990, DL & OL; 23-24.07.1993; DL).
51. 20-25 km NW of Erzin, Dus-Khol' Lake, 50°19'N 95°01'E, 1050 m a.s.l. (31.05-13.08.1989, DL; 10.06.1995, DL, YM & A. V. Abramov).
52. Sangelen Mt. Range, the upper reaches of Balyktyg-Khem River, 50°18'N 96°34'E, 2000-2300 m a.s.l. (26-28.06.1996, YM).
53. 15-20 km W of Erzin, Onchalaan and Yamaalyg Rocks, 50°16'N 94°54'E, 1150-1350 m a.s.l.(27.05-12.08.1989, DL; 11.07.1993, DL; 7-10.06.1995, YM & SK).
54. Sangelen Mt. Range, Pass between Naryn and Balyktyg-Khem Rivers, 50°15'N 96°20'E, 2550 m a.s.l. (26.06-5.07.1996, YM & D. V. Obydov).
55. Erzin environs, 50°14'N 95°09'E, 1165 m a.s.l. (14.08.1989, DL; 9.06.1995, YM & SK).
56. the upper reaches of Naryn River, 50°13'N 96°15'E, 1820-1900 m a.s.l. (24-26.06.1996, YM).
57. 30-35 km W of Erzin, Shara-Nur Lake environs, 800-900 m a.s.l., 94°32'E 50°12'N, 900 m a.s.l. (3-10.06.1989, DL & V. K. Zinchenko; 8.06.1995, YM).
58. 2-3 km S of Erzin, Tes-Khem River Valley, 50°12'N 95°08'E, 1000-1100 m a.s.l. (13-15.08.1989, DL; 23-26.05.1990, DL & OL; 9-10.06.1995, YM, SK, DL & A. V. Abramov).
59. the middle reaches of Naryn River, 50°12'N 95°39'E, 1540 m a.s.l. (22.06-6.07.1996, YM & D. V. Obydov).
60. 45-50 km SW of Mugur-Aksy, Khara-Kharagai River and Eski-Tolaity Lake, 50°10'N 90°05'E, 2100-2300 m a.s.l. (14-15.06.1989, DL).
61. 3-5 km NW of Kyzyl-Khaiya, Mogen-Buren River Canyon (right riverside), 50°08'N 89°48'E, 2100-2200 m a.s.l. (15.06.1989, DL).
62. ca 50 km SW of Erzin, Nariyn Gol (=Naryn) River, 50°05'N 94°37'E, 900 m a.s.l. (10.06.1989, DL).
63. Tere-Khol' Lake SE bank, Eder-Elezin Sands (desert), 50°01'N 95°03'E, Sharlaa Stand, 1150 m a.s.l. (8-9.08.1989, DL; 12.07.1993, DL; 11-12.6.1995, DL, YM & SK; 6-14.07.1996, YM).

1.6. List of habitats studied

GLT - goltsy (mountain tundra) landscape:
mwt - Mountain moss-tussock-shrubby wet tundra;
mst - Mountain moss-lichen-stony tundra;
sm - Subalpine meadow;
s - Scree (talus).

ILT - inundated landscape:
u - Urema (=flood plain forest of *Populus laurifolia-Betula microphylla-Salix* spp.);
ism - Inundated steppe-upland meadow (mostly with *Caragana spinosa*);
mm - Mesophytic meadow;
as - *Achnatherum splendens* stands (=saz steppe);
bf - Bulrush fen;
rpb - River pebble banks (or lake shores, sometimes saline).

MFLT - mountain forest-steppe landscape:
sss - Sloping shrub-stony steppe;
sms - Sloping meadow shrubby steppe;
lf - *Larix sibirica* forest (light coniferous forest);
mf - Taiga forest, including mixed taiga;

bef - Birch (*Betula pendula*) forest.
sm - Sedge (*Carex* spp.) moor;
sgg - Shrubby grass glades (=mesophytic grasslands);
s - Scree.

MSLT - mountain steppe landscape:
dns - Desert nanophanerophyte steppe (=tar steppe) (with *Nanophyton erinaceus*);
dbs - Dry shrub-grass (*Caragana-Stipa-Artemisia*) steppe;
sds - Desert sandy shrub-grass (*Caragana-Stipa-Artemisia*) steppe
cxs - Cryo-xerophylous, high-mountain (=cryophyte) steppe;
s - Cobble-gramineous stands (including scree).

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3. Survey of species

AGELENIDAE

***Agelena labyrinthica* (Clerck, 1758)** Map 1
[Roberts, 1995: p.241; Song et al., 1999: 205G-H, 207A]
Distribution: Trans-Palaearctic nemoral range (Marusik, 1994): from Western Europe to Japan (Tsurusaki, personal communication), north to southern Finland (Palmgren, 1977) and middle Ural (Esyunin & Efimik, 1996). In Asia found from southern Siberia (Mikhailov, 1997) south to Sichuan (Song et al., 1999).
Agelena labyrinthica (Clerck, 1758): 11, 12, 21, 23, 27, 30, 36, 44, 51, 53; ILT: U, Ism, As; MFLT: Sss, Sgg; MSLT: Dns, Dbs.

***Paracoelotes birulai* (Ermolaev, 1926)**
[Brignoli, 1982: ? f. 9-10]

Distribution: Siberio-Central Asian boreo-montane range: from Kyrgyzstan north to Altai (Mikhailov, 1997) and along South Siberia eastward to northern Sakhalin (Ovtchinnikov, 1999).
Comments. In spite of small differences found between the two females they most probably belong to a single known south Siberian species of Coelotini. Synonymy of *P. birulai* with *P. luctuosus* (L. Koch, 1878) was not supported by Ovtchinnikov (1999). Inhabits screes.
Coelotes sp. 1: 08; MFLT: Sss.
Coelotes sp. 2: 01; MFLT: Mf.

AMAUROBIIDAE

***Arctobius agelenoides* (Emerton, 1919)** Map 2
[Leech, 1972: f. 173-176, 385-386; Palmgren, 1977: f. 5.17-18]
Distribution: Subcircum-Holarctic hypoarcto-boreal range: from north Scandinavia via whole Siberia southward to Mongolia, northward to Chukotka (Marusik et al., 1992a). In Nearctic it occurs in western Canada and Alaska (Leech, 1972).
Arctobius agelenoides (Emerton, 1919): 26, 27, 40: MFLT: Lf, Mf.

ARANEIDAE

***Aculepeira carbonarioides* (Keyserling, 1892)** Map 2
[Holm, 1970: f. 25-27; 29-31; Levi, 1973: f. 162-173, 182-186]
Distribution: Siberio-trans-Nearctic arcto-alpine range (Marusik et al., 1996): from Polar Ural southward to East-Kazakhstan Area and Mongolia, northernmost record is a Lena River mouth (73°N) (Marusik et al. 1993). Widespread within Nearctic while unknown in central lowlands of Canada (Levi, 1977).
Comments. Inhabits kurums and screes in mountain tundra belt.
Aculepeira carbonarioides (Keyserling, 1892): 03, 61; GLT: S, MSLT: S.

***Aculepeira packardi* (Thorell, 1989)** Map 4
[Holm, 1945: f. 20a-b; Holm, 1970: f. 28; Levi, 1973: f. 148-161, 174, 176-181; Palmgren, 1974a: f. 12p-t]
Distribution: Circum-Holarctic boreo-nemoral range: from North Scandinavia (sub *Araneus lapponicus* Holm, 1945), via Ural southward to Kyrgyzstan, Mongolia and China (Marusik et al., 1996). Northernmost locality in Palaearctic is Olenyok River mouth (73°N).
Comments. Frequently Inhabits moist meadows bordering larch forests.
Aculepeira packardi (Thorell, 1875): 07, 09, 10, 12, 17, 25, 28, 29, 31, 34, 36, 40, 44, 54, 61, 63; MFLT: Sm, Sgg, Lf, Sms; ILT: Mm, Ism; MSLT: S, Dbs, Sds**.**

***Aculepeira cf. carbonarioides* (Keyserling, 1892)** Map 5
Distribution: Siberian boreo-nemoral range: from Tuva and Altai to Chita Area (Marusik et al., 1996) and northward to upper Kolyma.
Comments. Inhabits screes, cliffs and nearby shrubs in steppe landscapes.
Aculepeira sp. 1 (*cf. carbonarioides*): 05, 09, 14, 32, 38, 51; MFLT: S, Sss; ILT: As, Rpb; GLT: S; MSLT: Dbs, Dns.

***Araneus alsine* (Walckenaer, 1802)** Map 7
[Levi, 1971: f. 131-137; Roberts, 1995: p.319]

Distribution: Trans-Palaearctic boreo-nemoral range (Marusik, 1994): from Western Europe to Magadan Area in the east.
Comments. Meadow dweller.
Araneus alsine (Walckenaer, 1802): 31; MFLT: Sgg.

? ***Araneus grossus* (C.L. Koch, 1844)**
[Loksa, 1972: f. 64a-e]
Distribution: Euro-Tuvan (?) nemoral range: from Europe (Central and South) southward to Azerbaijan and Uzbekistan and eastward to Tuva (Heimer & Nentwig, 1992; Mikhailov, 1997).
Comments. Single female was found on *Caragana* bush in steppe.
? *Araneus grossus* (C.L. Koch, 1844): 12; MSLT: Dns.

***Araneus marmoreus* Clerck, 1757** Map 4
[Levi, 1971: f. 1-6, 100-105, 107-113, 183; Palmgren, 1974a: f. 9b, 10d-e; Roberts, 1995: p.319]
Distribution: Circum-Holarctic boreo-nemoral range (Marusik, 1994; Marusik et al., 1996): from Iceland (Agnarsson, 1996) and Portugal (Cardoso, 1999) to Kamchatka, southward to Kyrgyzstan, North China (Mikhailov, 1997; Yin et al., 1997b). In Nearctic from Alaska to Texas (Levi, 1971), unknown only in south-western states. In Manchuria (area south of Amur River to Korea and Honshu) vicariates probably an undescribed species.
Comments. An uncommon species in Tuva, while in other parts of boreal zone common in forest clearings.
Araneus marmoreus Clerck, 1758: 01, 05, 11, 56; MFLT: Lf, Sgg, Mf; ILT: Rpb.

***Araneus mongolicus* Simon, 1895**
Distribution: Western Mongolian range: from East Kazakhstan (Marusik et al., 1990) to western Mongolia (unpublished data).
**Araneus mongolicus* Simon, 1895: 53; MSLT: S.

***Araneus nordmanni* (Thorell, 1870)** Map 9
[Levi, 1971: f. 61-94, 96-99; Palmgren, 1974a: f. 8a-e]
Distribution: Circum-Holarctic boreo-nemoral range. Distribution limits nearly the same as in *A. marmoreus*. In Asia found from Mongolia (personal data) to Yakutia (Marusik et al., 1993) and Magadan Area (Marusik et al., 1992a).
Comments. Inhabits light forests, and semi shadowed forest openings.
Araneus nordmanni (Thorell, 1870): 05; MFLT: Mf.

***"Araneus" pallasi* (Thorell, 1875)** Map 3.
Neoscona chasisa Zhu et Song, 1994: 43, figs. 18a-e (m & f). **Syn.n**.
[Marikovski & Marusik, 1985: f. 1-9; Yin et al., 1997b: f. 244a-e; Song et al., 1999: 175M-N, 178P, 180E]
Distribution: Central Palaearctic steppe-desert range: from Ukraine, southward to Daghestan (Marusik, 1989b), Turkmenia, Kyrgyzstan (Mikhailov, 1997) and eastward via Xinjiang (Zhu & Song, 1994) and Tuva to East Mongolia.
Comments. This species together with *"A." strandiellus* belongs to an undescribed genus related to *Agalenatea*. Ecology of this species was described by Marikovski & Marusik (1985). These spiders are often abundant around lakes and other water bodies with stagnant water, exclusively in steppe and semi-desert zones.
"Araneus" pallasi (Thorell, 1875): 32, 34, 63; MSLT: Sds; ILT: Ism, Mm.

***Araneus quadratus* Clerck, 1757** Map 7
Araneus flavidus Yin et al., 1990: 30, f. 74-77. **Syn.n.**
[Levi, 1971: f. 152-158; Roberts, 1995: p.318; Yin et al., 1997b: f. 85a-d]
Distribution: Trans-Palaearctic boreo-nemoral range (Marusik et al., 1996): from Portugal to Sakhalin, southward to south Kazakhstan and Kyrgyzstan (Mikhailov, 1997). In north and eastern Siberia it is replaced by *A. yukon* Levi, 1971.
Comments. Always associated with moist meadows and vegetation around lakes or rivers within the forest zone.
Araneus quadratus Clerck, 1758: 12, 40; ILT: U; MFLT: Sms.

***Araneus cf. saevus* (L. Koch, 1872)** Map 5
Distribution: South Siberian steppe species: from Tuva to Transbaikalia (personal data) southward to Mongolia (Marusik & Logunov, 1999b).
Comments. Cliff inhabitant, chiefly in steppe biotopes.
Araneus sp. 1 (*cf. saevus*): 25, 44, 52, 53; MSLT: S, Dbs.

***"Araneus" strandiellus* Charitonov, 1951** Map 3
Distribution: Central Asian semidesert range: from south Tajikistan in the south to eastern Tuva.
Comments. Taxonomically this species belongs to the same, undescribed genus as *"A." pallasi* and occurs, at least in Tuva, in the same biotopes, but in much lower densities.
**"Araneus" strandiellus* Charitonov, 1951: 32, 63; MFLT: Sms; MSLT: Sds, Dns.

***Araniella displicata* (Hentz, 1847)** Map 8
[Levi, 1974b: f. 1-21; Palmgren, 1974a: 16g-j; Roberts, 1995: p.330]
Distribution: Circum-Holarctic boreo-nemoral range: from Europe to middle Anadyr River (Marusik et al., 1992a) and Kolyma River mouth (personal data), southward to Honshu (Tsurusaki, personal communication) and Shaanxi (Yin et al., 1997b).
Comments. Found in forest clearings, and among shrubs in moist meadows.
Araniella displicata (Hentz, 1847): 01, 07, 08, 09, 10, 11, 14, 23, 25, 28, 29, 30, 31, 34, 35, 36, 44, 46, 62; ILT: Ism, Mm; MFLT: Sgg, Mf, Lf, Sm, Sms, Sss.

***Araniella proxima* (Kulczyński, 1885)** Map 8
[Heimer & Nentwig, 1992: f. 174.1,3,5]
Distribution: Holarctic boreal range: from northern Europe (Heimer & Nentwig, 1992) eastward to Kamchatka, northward to Lapland (Palmgren, 1974a) and middle Ural (Esyunin & Efimik, 1996) and southward to Tuva. Exact range is unclear because it is often confused with *A. cucurbitina* (Clerck, 1757). In Nearctic recorded from Northwest Territories to Newfoundland, south to British Columbia and Quebec (Buckle & Roney, 1995).
Araniella proxima (Kulczynski, 1885): 63; ILT: U (?).

***Araniella yaginumai* Tanikawa, 1995** Map 3
[Chikuni, 1989: p.69, f. 25a; Tanikawa, 1995: f. 1-9]

Distribution: Siberio-Manchurian nemoral range: from Altai (sub *Araniella* sp., Marusik et al., 1996) eastward to Sakhalin, South Kuriles (personal data), Japan and Taiwan (Tsurusaki, personal communication).
**Araniella yaginumai* Tanikawa, 1995: 14; ILT: U (?).

***Atea sturmi* (Hahn, 1831)**
[Heimer & Nentwig, 1992: 179.1,3,5; Roberts, 1995: p.323]
Distribution: Trans-Palaearctic (?) boreo-nemoral range: from Iberian Peninsula (Cardoso, 1999) at least to Central Siberia. Records of this species from the Russian Far East (Mikhailov, 1997) and Fujian, China (Song et al., 1999) probably refer to *A. schrencki* (Grube, 1861).
Atea sturmi (Hahn, 1831) - 01, 03, 08; GLT: Sm; MFLT: Mf.

***Atea* sp. 1**
[? Wesołowska, 1988: f. 14-17]
Comments. Possibly females collected in Tuva belong to *A. schrenki* (Grube, 1861), known by males only. This species was redescribed by Wesołowska (1988) and is known from eastern Siberia.
Atea sp. 1: 14.

***Cercidia prominens* (Westring, 1851)** Map 9
[Levi, 1975: f. 47-57; Roberts, 1995: p.327]
Distribution: Circum-Holarctic polyzonal range (Marusik et al., 1996): whole Europe, southward to south Kazakhstan (desert zone) (Marusik et al., 1990), northeast to upper Kolyma (Marusik et al., 1992a). In Nearctic found east of 90°W along Great Lakes (Levi, 1975) and in northern Manitoba (Bennel-Aitchison & Dondale, 1990).
Comments. Inhabits moist and mesic meadows.
Cercidia prominens (Westring, 1851): 59; MFLT: Sgg.

***Cyclosa conica* (Pallas, 1772)** Map 11
[Levi, 1977: f. 1-19; Roberts, 1995: p.336]
Distribution: Circum-Holarctic boreo-nemoral range (Marusik et al., 1996) with disjunction in north-east Siberia (Mikhailov, 1997). Records from Zhejiang and Taiwan (Song et al., 1999) may refer to another species.
Comments. Inhabits coniferous forests.
Cyclosa conica (Pallas, 1772): 08, 23, 36; MFLT: Lf, Mf.

***Cyclosa cf. oculata* (Walckenaer, 1802)**
[?Tanikawa, 1992: f. 39-42]
Distribution: South Siberian steppe range. Records of *Cyclosa oculata* from Altai (Marusik et al., 1996) correspond to this species. It could be conspecific with Japanese *Cyclosa onoi* Tanikawa, 1992.
Comments. Lives on shrubby vegetation in dry meadows and in steppe communities.
Cyclosa sp. 1 (*cf. oculata*): 12, 27, 32, 34, 57, 58; ILT: Bf, Ism; MSLT: Dbs, Dns; MFLT: Sss.

***Gibbaranea hetian* (Hu & Wu, 1989)**
[Hu & Wu, 1989: f. 65.1-4; Yin et al., 1997: 121a-f; Song et al., 1999: f. 169O-P,S]

Distribution: West Mongolian range (?): from Xinjiang Prov. (Hu & Wu, 1989), northeastward to Tuva.
Comments. Records of *G. bituberculata* from Xinjiang and Qinghai no doubt refer to this species. Inhabits *Caragana* bushes in various xerophytic communities.
? *Gibbaranea bituberculata* (Walckenaer, 1802): 09, 12, 29, 32, 63; MFLT: Sss; MSLT: Dbs, Dns, Sds.

***Hypsosinga albovittata* (Westring, 1851)** Map 11
[Palmgren, 1974a: f. 4a-c; Roberts, 1995: p.330]
Distribution: Trans-Palaearctic polyzonal range (Marusik, 1994; Marusik et al., 1996): from Iberian Peninsula (Cardoso, 1999) to Magadan Area, northernmost record - Lena River (65°N) (Marusik et al., 1993), easternmost - upper Kolyma (Marusik et al., 1992a), southernmost - Turkmenia and Azerbaijan (Mikhailov, 1997) in Middle Asia, and Central Mongolia (Marusik & Logunov, 1998b) in Siberia.
Comments. Inhabits various types of meadows, but may also occur in steppe communities.
Hypsosinga albovittata (Westring, 1851): 09, 28, 45, 53; MSLT: Cxs, S; MFLT: Sms.

***Hypsosinga pygmaea* (Sundevall, 1831)** Map 12
[Levi, 1972: 44-57; Palmgren, 1974a: f. 4d-f; Roberts, 1995: p.331]
Distribution: Circum-Holarctic polyzonal range: in Eurasia known from Portugal (Cardoso, 1999) to Kamchatka (Mikhailov, 1997), northern limit in Siberia at about 65°N (Marusik et al. 1992a), southernmost records are in south China (Yin et al., 1997b). In Nearctic known from Alaska to Cuba (Levi, 1972).
Comments. Inhabits various types of meadows and steppe communities.
Hypsosinga pygmaea (Sundevall, 1831): 09, 23, 31, 34, 35, 38, 57, 58, 62; ILT: Bf, Mm, Ism; MSLT: Dbs; MFLT: Sss.

***Hypsosinga sanguinea* (C.L. Koch, 1844)** Map 13
[Levi, 1972: 35-43; Palmgren, 1974a: f. 3h-l; Roberts, 1995: p.331]
Distribution: Trans-Palaearctic polyzonal range (Marusik, 1994; Marusik et al., 1996): from Iberian Peninsula (Cardoso, 1999) eastward to Kamchatka (Mikhailov, 1997), in Asia northward to Central Yakutia and Upper Kolyma (Marusik et al., 1992a, 1993) and southward to South China (Levi, 1971).
Comments. Like its other congeners this species inhabits meadows and steppes.
Hypsosinga sanguinea (C.L. Koch, 1844): 14, 31, 32, 34, 40, 63; ILT: Ism; MSLT: Sds, Dns.

***Larinia bossae* Marusik, 1986** Map 6
[Marusik, 1986: f. 25-29]
Distribution: Mongolo-Manchurian steppic range: from Tuva (Logunov et al., 1998) in the west, eastward to Russian Far East (Marusik, 1986).
Comments. Inhabits shrubby and herbaceous vegetation around lakes in steppe and semidesert landscapes. Often occurs in great numbers.
Larinia bossae Marusik, 1986: 17, 34, 51, 57, 63; ILT: U, As, Bf, Ism; MSLT: Dbs, Sds.

***Larinioides cornutus* (Clerck, 1757)**
[Thaler: 1974: f. 3-4, 6, 8, 11; Palmgren, 1974a: f. 9e, 11a-e; Roberts, 1995: p.321]
Distribution: Circum-Holarctic polyzonal range (Marusik, 1994): throughout all of Eurasia, northward to the down flow of Yana River, 72°N (Kulczyński, 1908) and southward to Yunnan (Song et al., 1999). In Nearctic known from Alaska to Panama

(Levi, 1974b). Southern limit of distribution both in Nearctic and in Palaearctic is obscure because of presence of sibling forms. Most probably records in south China refer to *L. folium* or other species.
Comments. Lives on shrubs and herbaceous vegetation around water bodies and bogs in taiga and mountain tundra landscapes.
Larinioides cornutus (Clerck, 1758): 03, 07, 23; MFLT: Sm; GLT: Sm.

***Larinioides folium* (Schrank, 1803)**
[Heimer & Nentwig, 1992: f. 193.1,3]
Distribution: Euro-Mongolian (?) nemoral-desert range: from Central Europe to Central Asia and eastward to eastern Tuva.
Comments. Distribution of this species is obscure because of strong similarities with *L. cornutus*. It may occur further to the east, and probably the records of *L. cornutus* from south China (Song et al., 1999) refer to *L. folium*. Inhabits shrubs and herbaceous vegetation around water bodies and bogs within steppe and desert landscapes.
Larinioides folium (Schrank, 1803): 09, 12, 34, 57, 63; ILT: Bf; MFLT: Sms, Sss.

***Larinioides patagiatus* (Clerck, 1757)** Map 13
[Levi, 1974: f. 77-84, 100-102, 107, 112-113, 120-123, 127; Palmgren, 1974a: f. 9f, 11f-j; Roberts, 1995: p.332]
Distribution: Circum-Holarctic polyzonal range (Marusik, 1994): from tundra (up to 71°N) to desert zone (southward to Tajikistan and Inner Mongolia) (Marusik et al., 1993; Mikhailov, 1997; Yin et al., 1997b). In Nearctic distributed from Alaska to Texas (Levi, 1974).
Comments. Inhabits chiefly open forest and forest clearings.
Larinioides patagiatus (Clerck, 1758): 07, 09, 10, 17, 23, 30, 31, 32, 63; ILT: U, Mm; MFLT: Mf, Lf, Sgg, Sss.

***Neoscona adianta* (Walckenaer, 1802)** Map 12
[Roberts, 1995: p.324; Yin et al., 1997b: 243.a-g]
Distribution: Trans-Palaearctic nemoral-desert range (Marusik, 1994): from south part of forest zone southward to desert. In Europe known north to southern Sweden (Kronestedt, 1983). In East Palaearctic occurs from southern Siberia eastward to Kuriles (personal data) and southward to Sichuan (Yin et al., 1997b).
Comments. Inhabits meadows.
Neoscona adianta (Walckenaer, 1802): 09, 12, 34; MFLT: Sss; MSLT: Dbs.

***Singa nitidula* C.L. Koch, 1844** Map 10
[Roberts, 1995: p.333]
Distribution: Trans-Palaearctic (?) boreo-nemoral range: from Portugal (Cardoso, 1999) eastward to Russian Far East (Mikhailov, 1997 and personal data) northward to middle Finland (Palmgren, 1974a) and Cispolar Ural (Esyunin & Efimik, 1996), south to Azerbaijan and Kyrgyzstan (Mikhailov, 1997).
Singa nitidula C.L. Koch, 1844: 05, ILT: Rpb.

***"Zygiella" stroemi* (Thorell, 1875)** Map 10
[Levi, 1974a: f. 102-110; Roberts, 1995: p.336]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to Russian Far East (personal data), north to Lapland (Palmgren, 1974a) and north Ural (Esyunin & Efimik, 1996), south to Maritime Province and Central Mongolia (Marusik & Logunov, 1998b).

"Zygiella" stroemi (Thorell, 1875): 07, 31, 49; MFLT: Sms; ILT: U.

ARGYRONETIDAE

***Argyroneta aquatica* (Clerck, 1758)** Map 14
[Roberts, 1995: p.239; Song et al., 1999: 207H-J]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe eastward to north Cisokhotia (personal data) and Sakhalin (Marusik et al., 1992b), north to Arctic Ocean coast (Palmgren, 1977), north Ural (Esyunin & Efimik, 1996), southern Yakutia (Marusik et al., 1993), south to Azerbaijan, Uzbekistan (Mikhailov, 1997), Inner Mongolia (Song et al., 1999), Honshu and Korea (Tsurusaki, personal communication).
Comments. All specimens were found in small fresh water lakes.
Argyroneta aquatica (Clerck, 1758): 57, 63; ILT: Bf.

CLUBIONIDAE

***Cheiracanthium erraticum* (Walckenaer, 1802)** Map 15
[Tullgren, 1946: f. 11a, VI.69-71; Roberts, 1995: p.133]
Distribution: Trans-Palaearctic boreo-nemoral (?) range: from Europe to upper Kolyma (63°N, Marusik et al., 1992a) southward to NE China (Song et al., 1999). Reported from Central Asia southward to Tajikistan (Mikhailov, 1997).
Cheiracanthium erraticum (Walckenaer, 1802): 31, 35, 40, 63; MFLT: Sgg, Sms.

***Cheiracanthium* sp. 1**
Comments. It might be an undescribed species. Distribution outside of Tuva is unknown to us.
Cheiracanthium sp. 1: 09, 21, 29, 32, 34, 49, 53; ILT: Mm, Ism, U; MFLT: Sgg, Sm, Sss.

***Cheiracanthium* sp. 2**
Comments. It might be an undescribed species. Distribution outside of Tuva is unknown to us.
Cheiracanthium sp. 2: 34, 63; MSLT: Sds, Dns.

***Clubiona caerulescens* L. Koch, 1867** Map 15
[Heimer & Nentwig, 1992: f. 1047; Roberts, 1995: p.127; Song et al., 1999: 245A, 247I-J]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to north Cisokhotia (Marusik et al., 1992a) and Sakhalin, southward to Azerbaijan, Kazakhstan and Inner Mongolia (Mikhailov, 1997; Song et al., 1999).
Clubiona caerulescens L. Koch, 1867: 07, 23; MFLT: Mf, Lf. (Mikhailov 1992).

***Clubiona diversa* (O.P.-Cambridge, 1862)** Map 16
[Tullgren, 1946: f. 2c, I.8-10; Heimer & Nentwig, 1992: f. 1061; Roberts, 1995: p.132]
Distribution: Trans-Palaearctic boreal range: from Middle and North Europe eastward to upper Kolyma and Sakhalin (Mikhailov, 1997), southward to Honshu (Tsurusaki, personal communication).
Clubiona diversa O.P.-Cambridge, 1862: 11, 17, 19, 27, 40, 56; ILT: Mm, U; MFLT: Lf. (Mikhailov 1992).

***Clubiona interjecta* L. Koch, 1879** Map 6.
[Kulczyński, 1908: f. 81-83; Holm, 1973: f. 102-105]
Distribution: Siberian boreal range: from Yenisei River (Holm, 1973) and Tuva east-

ward to Kamchatka (Mikhailov & Marusik, 1995; Mikhailov, 1997), northward to Yana River mouth (Marusik et al., 1993) and southward to Mongolia.
Clubiona interjecta L. Koch, 1879: 11, 12, 51, 63; ILT: As, U; MSLT: Sds. (Mikhailov 1992).

***Clubiona kulczynskii* Lessert, 1905** Map 17
[Tullgren, 1946: f. 8a-b, IV.49-51; Dondale & Redner, 1982: f. 158-161; Heimer & Nentwig, 1992: f. 1039]
Distribution: Circum-Holarctic boreo-nemoral range: from Middle and North Europe to Kamchatka, northward to Polar Circle in Yakutia, and southward to Mongolia (Marusik et al., 1993; Mikhailov, 1997).
Comments. Inhabits various mesophytic biotopes with herbaceous vegetation.
Clubiona kulczynskii Lessert, 1905: 04, 05, 06, 07, 08, 09, 11, 13, 23, 31, 40; GLT: Sm; MFLT: Mf, Bef, Sms. (Mikhailov 1992).

***Clubiona latericia* Kulczyński, 1926** Map 11
[Kulczyński, 1926: f. 27; Dondale & Redner, 1982: f. 143, 145-146; Mikhailov & Marusik, 1995: f. 3-5, 15-18]
Distribution: Siberian-West Alaskan boreal range. From Tuva in the southwest, north to Olenyok River mouth, east to northwest Alaska and southeast to Maritime Province (Dondale & Redner, 1982; Mikhailov, 1990; Mikhailov & Marusik, 1995).
Comments. Rather rare throughout range, occurs chiefly in meadows.
Clubiona latericia Kulczynski, 1926: 07, 23, 63; MFLT: Sm. (Mikhailov 1992).

***Clubiona lutescens* Westring, 1851** Map 17
[Dondale & Redner, 1982: f. 170-173; Heimer & Nentwig, 1992: f.1956; Roberts, 1995: p.129]
Distribution: Trans-Palaearctic- West Nearctic boreo-nemoral range: from Europe to Japan and Korea, northward to Cispolar Ural (Esyunin & Efimik, 1996), south to Azerbaijan and Kazakhstan (Mikhailov, 1997). In Nearctic known from southern British Columbia and Washington State (Dondale & Redner, 1982). Probably introduced to North America (Buckle, personal communication).
? *Clubiona lutescens* Westring, 1851: 63; ILT: U.

***Clubiona neglecta* O. P.-Cambridge, 1862** Map 16
[Heimer & Nentwig, 1992: f. 1053; Roberts, 1995: p.128]
Distribution: Trans-Palaearctic nemoral range: from Iberian Peninsula (Cardoso, 1999) via South Siberia eastward to Korea (Esyunin & Efimik, 1996), and southward to Sichuan and Zhejiang (Song et al., 1999).
Clubiona neglecta O.P.-Cambridge, 1862: 12, 17, 21, 23, 51, 57, 58, 63; ILT: U, As, Mm, Rpb; MFLT: Sgg; MSLT: Sds. (Mikhailov 1992).

***Clubiona pallidula* (Clerck, 1758)** Map 18
[Dondale & Redner, 1983: f. 174-177; Roberts, 1995: p.127]
Distribution: Circum-Holarctic nemoral range: from Swedish Lapland (Kronestedt, personal communication) via Middle and South Ural along south Siberia to Sakhalin and southward to Azerbaijan and Uzbekistan (Mikhailov, 1997). In Nearctic known from coastal parts of British Columbia, Washington and in Ontario (Dondale & Redner, 1982). It has probably been introduced to North America.
Clubiona pallidula (Clerck, 1758): 07, 08, 14, 30, 34, 49, 58; ILT: As, U, Rpb; MFLT: Mf, Bef. (Mikhailov 1992).

***Clubiona phragmitis* C.L. Koch, 1843** Map 14
[Heimer & Nentwig, 1992: f. 1051; Roberts, 1995: p.128]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to Korea (Esyunin & Efimik, 1996), north to Swedish Lapland (Kronestedt, personal communication), and middle Ural and southward to northern Iran (personal data) and Qinghai (Song et al., 1999).
Clubiona phragmitis C.L. Koch, 1843: 63; ILT: Bf. (Mikhailov 1992).

***Clubiona pseudosaxatilis* Mikhailov, 1992** Map 21
[Mikhailov, 1992: f. 3a-c, 4a-b]
Distribution: West Mongolian range: from East-Kazakhstan Area to Tuva (Mikhailov, 1992).
Clubiona pseudosaxatilis Mikhailov, 1992: 43, 50; ILT: U. (Mikhailov 1992).

***Clubiona riparia* L. Koch, 1866** Map 186
[Dondale & Redner, 1982: f. 166-169; Mikhailov & Marusik, 1995: 1-2, 12-14]
Distribution: Siberio-Manchurian (east Palaearctic) -Trans-Nearctic boreo-nemoral range: from Ural (Esyunin & Efimik, 1996) eastward to Chukotka (Marusik et al., 1992a) and southward to South Kuriles, Hokkaido (Mikhailov, 1997) and Mongolia (Marusik & Logunov, 1998b). In Nearctic distributed from Alaska to Newfoundland, southward to New Mexico and Maryland (Dondale & Redner, 1982).
Comments. Inhabits meadows.
Clubiona riparia L. Koch, 1866: 23, 32, 34, 51, 58, 63; ILT: Ism, As; MFLT: Sm. (Mikhailov 1992).

***Clubiona stagnatilis* Kulczyński, 1897** Map 1
[Heimer & Nentwig, 1992: f. 1048; Roberts, 1995: p.126]
Distribution: Euro-Baikalian boreo-nemoral range: from Europe to Baikal, north to Lapland and Polar Ural, south to Afghanistan (Esyunin & Efimik, 1996; Mikhailov, 1997) and Indian Himalayas (personal data).
Clubiona stagnatilis Kulczynski, 1897: 11; MFLT: Lf. (Mikhailov 1992).

***Clubiona subsultans* Thorell, 1875** Map 19
[Heimer & Nentwig, 1992: f. 1040; Roberts, 1995: p.126]
Distribution: Euro -Baikalian nemoral range: from Europe to Mongolia. Record of this species from Japan is doubtful (Tsurusaki, personal communication).
Clubiona subsultans Thorell, 1875: 20, 58, 63; ILT: U. (Mikhailov 1992).

DICTYNIDAE

***Archaeodictyna consecuta* (O.P.-Cambridge, 1872)** Map 19
[Holm, 1945: f. 26a-d; Lehtinen, 1967: f. 299, 307, 317; Heimer & Nentwig, 1992: f. 978; Danilov, 1994: f. 3-4; Song et al., 1999: 213B-C, F]
Distribution: Trans-Palaearctic (?) boreo-nemoral (polyzonal) range: from Iberian Peninsula (Cardoso, 1999) north to Lapland (sub. *Dictyna terricola* Holm, 1945, Palmgren, 1977), east to Hebei, south to north Africa and Israel (Esyunin & Efimik, 1996; Song et al., 1999) and north Himalayas (personal data).
Comments. It is possible that records from such different areas as Lapland and Israel refer to different species (e.g. *A. ammophila* (Menge, 1871). A single female was found in Tuva.

Archaeodictyna consecuta (O.P.-Cambridge, 1872): 42; MSLT: Cxs (?).

***Arctella lapponica* Holm, 1945** Map 20
[Holm, 1945: f. 23a-g]
Distribution: Trans-Palaearctic-NW Nearctic hypoarcto-boreo-montane range: from north Scandinavia via Polar Ural to Chukotka Peninsula and south to Tuva and north Mongolia (Palmgren, 1977; Eskov, 1988c; Marusik et al., 1992a; Marusik & Logunov, 1998b). In Nearctic distributed from Alaska to northwestern Northwest Territories (Dondale et al., 1997).
Comments. Inhabits leaf and moss litter in mountain tundra and in forest close to timberline.
Arctella lapponica Holm, 1945: 35, 42, 45, 54, 56; MSLT: Cxs.

***Hackmania prominula* (Tullgren, 1948)** Map 23
[Holm, 1945: f. 23a-g; Chamberlin & Gertsch, 1958: f. 1.6-9; Palmgren, 1977: f. 5.9-12]
Distribution: Trans-Palaearctic-NW Nearctic hypoarcto-alpine range (Marusik, 1994): from North Scandinavia along coastal tundra to Yenisei, southward to Mongolia, northward to Chukotka. In Nearctic recorded from Yukon, North-West Territories and northern British Columbia (Dondale et al., 1997).
Comments. Inhabits litter in deciduous and larch forests.
Argenna prominula Tullgren, 1948: 26, 27, 30; MFLT: Mf, Lf.

***Argenna* sp.**
Comments. This species is close to *A. subnigra* (O.P.-Cambridge, 1861). It seems to be a new species and found in eastern Tuva.
Argenna sp. 1: 31, 34; ILT: As (?).

****Devade uiensis uiensis* Esyunin, 1994** Map 24
[Esyunin, 1994: f. 2g, 3f,g, 4e-h; Esyunin & Efimik, 2000: 1.1-2, 2.7, 3.3-4]
Distribution: West Siberian nemoral range: previously known only from two localities in Chelyabinsk Area (Esyunin & Efimik, 2000). Tuva is easternmost locality both for species and subspecies.
Comments. All specimens from Tuva and Ural were found among stones along rivers.
Locality: 14.

***Devade tenella* (Tyshchenko, 1965)** Map 24
[Esyunin, 1994: f. 1e-g, 3d-e; Esyunin & Efimik, 2000: f. 2.3-6,11-12, 3.1-2]
Distribution: Central Asian steppic range: from western Kazakhstan to Tuva (northeasternmost locality), south to northern Kyrgyzstan (Esyunin & Efimik, 2000).
Comments. Male from locality #55 was identified by Esyunin with some uncertainty.
? *Devade indistincta tatyanae* Esyunin, 1994: 55; MSLT: Dbs.

***Dictyna alaskae* Chamberlin et Ivie, 1947** Map 20
[Chamberlin & Ivie, 1947: f. 2-3; Chamberlin & Gertsch, 1958: f. 22.10-12; Holm, 1987: f. 17-21]
Distribution: Circum-Holarctic boreal range: from Fennoscandia (Holm, 1987) to Chukotka (Marusik et al., 1992a), south to Tuva (Logunov et al., 1998). In Nearctic known from Alaska to Newfoundland, and south to Montana (Dondale et al., 1997).
Comments. Inhabits sparse larch taiga on north exposed slopes with moss and lichen cover. All specimens were collected by sweeping Ericaceae shrubs.
Dictyna alaskae Chamberlin & Ivie, 1947: 07, 35; MFLT: Mf.

***Dictyna arundinacea* (Linnaeus, 1758)** Map 26
[Chamberlin & Gertsch, 1958: f. 22.5-71; Roberts, 1995: p.83]
Distribution: Circum-Holarctic polyzonal range (Marusik et al., 1996): from Iceland (Agnarsson, 1996) and Iberian Peninsula (Cardoso, 1999) to Kamchatka, north to Lapland (Palmgren, 1977), lower Lena River (67°N) and upper Kolyma, south to Mediterranean, Central Asia, Mongolia and Korea (Esyunin & Efimik, 1996; Marusik et al., 1993, 1996).
Comments. Found in open habitats with mesophytic vegetation.
Dictyna arundinacea (Linnaeus, 1758): 07, 08, 09, 11, 23, 28, 30, 32, 34, 35, 36, 46, 49, 52, 55, 58, 63; ILT: Mm, U, Rpb, Ism; MFLT: Mf, Lf, Sm, Sgg, Sms, Sss; MSLT: Sds.

***Dictyna major* Menge, 1869** Map 23
[Chamberlin & Gertsch, 1958: f. 24.2-4; Roberts, 1995: p.84]
Distribution: Circum-Holarctic polyzonal range (Marusik, 1994): from Central and North Europe (Heimer & Nentwig, 1992) to Chukotka Peninsula (Marusik, 1992a) south to Central Asia and Mongolia (Mikhailov, 1997; Marusik & Logunov, 1998b). In Nearctic distributed from Alaska to Greenland, south to northern California and South Dakota (Dondale et al., 1997).
Comments. Inhabits meadows bordering larch forests
Dictyna major Menge, 1869: 09; ILT: Mm.

***Dictyna obydovi* Marusik & Koponen, 1998**
[Marusik & Koponen, 1998: f. 24-26]
Distribution: Tuvan range: known from a single locality only.
Comments. Type series was collected in over-grazed steppe.
Dictyna obydovi Marusik & Koponen, 1998: 59; MSLT: Dbs.

***Dictyna pusilla* Thorell, 1856** Map 25
[Roberts, 1995: p.83; Palmgren, 1977: f. 4.10-13]
Distribution: Trans-Palaearctic boreal range (Marusik et al., 1996): from Europe eastward to Kamchatka (Mikhailov, 1997), northward to lower Lena River (Marusik et al., 1993) and southward to Mongolia.
Dictyna pusilla Thorell, 1856: 07; MFLT: Mf, Sgg.

***Dictyna cf. schmidti* Kulczyński, 1926** Map 26
[Lehtinen, 1967: f. 321; Palmgren, 1977: f. 4.7-9]
Distribution: Trans-Palaearctic boreal range: from northern Finland to upper Kolyma and south to Sayany Mts and Buryatia (Marusik & Hippa, in press).
Comments. It is an undescribed species found in meadow bordering coniferous forest.
Dictyna palmgreni Marusik & Hippa, 1998: 04; GLT: Sm.

****Dictyna sotnik* Danilov, 1994 Map 21**
[Danilov, 1994: f. 26-28; Marusik & Koponen, 1998: f. 31]
Distribution: Pan-Mongolian steppic-desert range: from east Altai (personal data) south to South Gobi (Marusik & Logunov, 1998b) and eastward to Baikal (Danilov, 1994; Marusik & Koponen, 1998).

Comments. The single Tuvan specimen was collected in stony debris in steppe.
Locality: 32 (Marusik & Koponen, 1998).

***Dictyna ubsunurica* Marusik & Koponen, 1998**
[Marusik & Koponen, 1998: f. 18-21]
Distribution: East Tuvan range: found in south Tuva east of Ubsu-Nur Lake.
Comments. All specimens were collected by sweeping shrubs and herbaceous vegetation around lakes and along river banks in steppic landscapes.
Dictyna ubsunurica Marusik & Koponen, 1998: 34, 55, 58, 63; ILT: U, Ism, As; MSLT: Dbs, Sds.

***Dictyna uncinata* Thorell, 1856** Map 25
[Palmgren, 1977: 2.21-23]
Distribution: Trans-Palaearctic boreo-nemoral range: from Fennoscandia to Kolyma River mouth and Kamchatka, south to south Mediterranean, Caucasus, Central Asia, Mongolia and Japan (Esyunin & Efimik, 1996; Marusik et al., 1992a, 1993, 1996).
Comments. Almost all specimens were found in deciduous forests and tree stands close to water bodies.
Dictyna uncinata Thorell, 1856: 14, 58, 63; ILT: U; MFLT: Sm.

***Dictyna uvs* Marusik & Koponen, 1998**
[Marusik & Koponen, 1998: f. 22-23]
Distribution: East Tuvan range: known so far from two localities only.
Comments. Three known specimens were collected in steppe habitats.
Dictyna uvs Marusik & Koponen, 1998: 34, 49; MSLT: Dns.

***Emblyna annulipes* (Blackwall, 1846)** Map 27
[Chamberlin & Gertsch, 1958: f. 37.1-5; Palmgren, 1977: 4.1-3; Heimer & Nentwig, 1992: f. 976]
Distribution: Circum-Holarctic boreo-nemoral range: from Central Europe (Heimer & Nentwig, 1992) to Sakhalin, north to north Lapland, Central Yakutia and north Cisokhotia, south to Azerbaijan and south Siberia (Marusik et al., 1992a,b, 1993; Mikhailov, 1997). In Nearctic known from Alaska to Newfoundland, south to Oregon, Colorado and Virginia (Dondale et al., 1997).
Comments. Majority of specimens were found in flood plain meadows.
Emblyna annulipes (Blackwall, 1846): 07, 08, 09, 14, 32, 34, 49, 63; ILT: U, Ism, Rpb, MFLT: Mf.

***Emblyna logunovi* Marusik & Koponen, 1998** Map 22
[Marusik & Koponen, 1998: f. 12-17]
Distribution: Mongolian steppe-desert range: from Tuva southeastward to Ulan-Bator (Marusik & Koponen, 1998).
Emblyna logunovi Marusik & Koponen, 1998: 12, 32, 49; MSLT: Dns

***Emblyna mongolica* Marusik & Koponen, 1998** Map 22
[Marusik & Koponen, 1998: f. 6-9]
Distribution: Mongolian steppe-desert range: from Tuva southwestward to Bulgan Aimak, southward to Bayankhongor Aimak and eastward to Chita Area (Marusik & Koponen, 1998).
Comments. Known from forests and steppe biotopes.

Emblyna mongolica Marusik & Koponen, 1998: 12, 14; MSLT: Dns.

? *Lathys stigmatisata* (Menge, 1863)
Comments. Distributional range of this species is unclear like taxonomy of *stigmatisata* species-group. At least two sibling species are known in East Palaearctic: *L. alberta* Gertsch, 1946 and *L. truncatus* Danilov, 1994 and one species, *L. taczanowskii* O.P.-Cambridge, 1873, from Cisbaikalia, was synonymised with *L. puta* (cf. Lehtinen, 1967). Recently (Merrett, 1998) it was found that *L. puta* is in fact a junior synonym of *Argenna subnigra* (O.P.-Cambridge, 1861), and therefore all records of *L. puta* correspond to *L. stigmatisata*. It is rather probable that two closely related species occur in Tuva.
? *Lathys puta* (O. P.-Cambridge, 1863): 05, 08, 11, 12, 14, 27, 29, 30, 32, 34, 35, 53; GLT: Mst; ILT: Ism; MFLT: Sss, Sms, Mf, S; MSLT: S, Dns.

DOLOMEDIDAE

***Dolomedes bukhkaloi* Marusik, 1988** Map 156
[Marusik, 1988a: f. 1.1-5]
Distribution: East Siberian boreal range: from Tuva to upper Kolyma (Marusik et al., 1992a).
Dolomedes bukhkaloi Marusik, 1988: 07, 63; ILT: Bf; MFLT: Sm.

***Dolomedes plantarius* (Clerck, 1758)** Map 160
[Holm, 1947: f. VIII.89; Roberts, 1995: p.238]
Distribution: Euro-Mongolian nemoral range: from Europe to Tuva, north to southern Finland (personal data) and middle Ural (Esyunin & Efimik, 1996), and south to Ukraine and Kazakhstan (Mikhailov, 1997)-
Dolomedes plantarius (Clerck, 1758): 01; MFLT: Sm.

ERESIDAE

? ***Eresus cinnaberinus* (Olivier, 1787)** Map 24
[Heimer & Nentwig, 1992: f. 112; Danilov, 1994: f. 1; Song et al., 1999: f. 31A-B]
Distribution: Trans-Palaearctic (?) nemoral range: from western Europe to Heilongjiang and Korea, north to England (Roberts, 1995), southern Sweden (Kronestedt, personal communication), middle Ural, and Tomsk, south to North Africa and Shandong (Esyunin & Efimik, 1996; Danilov, 1994; Mikhailov, 1997; Song et al., 1999).
Comments. Its is possible that several species are treated as *E. cinnaberinus*, and that the range of this species is smaller in fact. All specimens were found in *Nanophyton* steppe around Kyzyl.
? *Eresus cinnaberinus* (Olivier, 1787): 12, 14; MSLT: Dns.

GNAPHOSIDAE

***Berlandina potanini* Schenkel, 1963** Map 30
[Hu, Wu, 1989: f. 206.1-4; Marusik & Logunov, 1995a: f. 1-3; Song et al., 1999: f. 259A]
Distribution: Mongolian range: North China (Gansu, Inner Mongolia and Xinjiang), Tuva and Mongolia (Marusik & Logunov, 1995a; Song et al., 1999).
Berlandina potanini Schenkel, 1963: 12, 17, 34; ILT: As; MSLT: Dns. (Marusik & Logunov 1995).

***Berlandina schenkeli* Marusik & Logunov, 1995**

[Marusik & Logunov, 1995a: f. 4-7]
Distribution: Tuvan range: known from only two localities in east and west Tuva.
Berlandina schenkeli Marusik & Logunov, 1995: 50, 55; ILT: As; MSLT: Dbs, Cxs. (Marusik & Logunov 1995).

***Berlandina ubsunurica* Marusik & Logunov, 1995** Map 30
[Marusik & Logunov, 1995a: f. 8-10]
Distribution: Mongolian steppe range: Tuva (Marusik & Logunov, 1995a) and Mongolia.
Comments. Inhabits steppe biotopes.
Berlandina ubsunurica Marusik & Logunov, 1995: 09, 32, 34; ILT: Ism; MFLT: Sss; MSLT: Dns. (Marusik & Logunov 1995).

***Callilepis nocturna* (Linnaeus, 1758)** Map 29
[Tullgren, 1946: f. 28, XV.185-186; Roberts, 1995: p.120; Heimer & Nentwig, 1992: f. 1097; Ovtsharenko & Marusik, 1995: f. 1.1-3; Song et al., 1999: f. 259B,I]
Distribution: Trans-Palaearctic polyzonal range (Marusik & Logunov, 1995): from Europe, north to Lapland (Kronestedt, personal communication), northeast to Magadan Area and southward to Hokkaido (Tsurusaki, personal communication), and Russian Far East (Mikhailov, 1997).
Comments. Occupies open, dry habitats.
Callilepis nocturna (Linnaeus, 1758): 01, 09, 11, 12, 13, 23, 27, 30, 32, 44, 46, 49, 50, 53, 55, 57, 58, 60, 62, 63; ILT: Rpb; MFLT: Sss; MSLT: Sds, Dns, S, Cxs. (Marusik & Logunov 1995).

***Drassodes cupreus* (Blackwall, 1834) *sensu* Roberts (1995)** Map 29
[Roberts, 1995: p.105; Ovtsharenko & Marusik, 1995: f. 1.7-8]
Distribution: Trans-Palaearctic boreo-nemoral range. Details of distribution are obscure. Most probably all records of *D. lapidosus* (Walckenaer, 1802) from Siberia and China refer to this species.
? *Drassodes lapidosus* (Walckenaer, 1802): 02, 09, 05, 08, 26, 27, 29, 40, 42, 47, 52, 56; GLT: Sm, Mst, Mwt; ILT: Mm; MFLT: S, Mf, Sss, Sms. (Marusik & Logunov 1995).

***Drassodes kaszabi* Loksa, 1965** Map 32
[Loksa, 1965: f. 46; Marusik & Logunov, 1995a: f. 11-12]
Distribution: West Mongolian range: from Tuva on the north-east, southward to Chovd, and eastward to Uburkhangai (Loksa, 1965; Marusik & Logunov, 1995a, 1998)
Drassodes kaszabi Loksa, 1965: 41; MSLT: Cxs. (Marusik & Logunov 1995).

***Drassodes lesserti* Schenkel, 1936** Map 32
[Schenkel, 1936: f. 83; Marusik & Logunov, 1995a: f. 13-18]
Distribution: Mongolian range: from Tuva (Logunov et al., 1998), eastward to Heilongjiang and southward to Inner Mongolia (Song et al., 1999).
Comments. Steppe dweller.
Drassodes lesserti Schenkel, 1936: 11, 12, 13, 18, 23, 31, 32, 34, 38, 46, 49, 50, 51, 53, 55, 63; ILT: As, Ism; MFLT: Sss; MSLT: Dns, Dbs. (Marusik & Logunov 1995).

***Drassodes longispinus* Marusik & Logunov, 1995** Map 34
[Marusik & Logunov, 1995a: f. 26-33]
Distribution: South Siberian steppe range: from Tuva in the north-west eastward to Chita Area (personal data) and southward to Middle Gobi.

Comments. It is possible that figure of a male from Xinjiang (211.3) in Hu & Wu (1989) represents this species.
Drassodes longispinus Marusik & Logunov, 1995: 07, 09, 11, 12, 14, 16, 18, 19, 32, 34; MFLT: S, Sss, Sms; MSLT: Dns. (Marusik & Logunov 1995).

***Drassodes neglectus* (Keyserling, 1887)** Map 27
[Ovtsharenko & Marusik, 1988: f. 63-66; Platnick & Dondale, 1992: f. 232-235; Ovtsharenko & Marusik, 1995: f. 1.9-10]
Distribution: Siberio-trans-Nearctic polyzonal range (Marusik et al., 1996): from Altai southward to Mongolia (South Gobi, Marusik & Logunov, 1998b), north to Kolyma River mouth and northeast to East Chukotka (67°N, 177°E) (Marusik et al. 1992; $$). In Nearctic known from Alaska to Newfoundland, south to Arizona and West Virginia (Dondale et al., 1997).
Comments. Inhabits mainly dry and xeric biotopes.
Drassodes neglectus (Keyserling, 1887): 11, 12, 14, 23, 27, 28, 30, 34, 35, 49, 50, 53, 58; ILT: U, Ism, Rpb; MFLT: Sms, Sss; MSLT: Dns, Dbs, S. (Marusik & Logunov 1995).

***Drassodes pseudolesserti* Loksa, 1965** Map 29
[Loksa, 1965: f. 39-43]
Distribution: West Mongolian (?) range: from Tuva and Khakassia (Marusik & Logunov, 1995a) south to Uburkhangai and eastward to Central Aimak. Recently studied material from Indian Himalayas shows that this species probably occurs in Tibet-Himalayas as well.
Drassodes pseudolesserti Loksa, 1965: 19; MFLT: Sss. (Marusik & Logunov 1995).

***Drassodes serratidens* Schenkel, 1963** Map 28
[Marusik & Logunov, 1995a: 19-25; Song et al., 1999: f. 259P, 260A]
Distribution: Mongolo-Manchurian nemoral-steppe range: from Xinjiang ? (Hu, Wu, 1989) via Mongolia and China eastward to Korea (Paik & Kim, 1994), Honshu (Tsurusaki, personal communication) and South Kuriles (150°E, personal data), northward to Tuva (Logunov et al., 1998) and south to Tibet and Hebei (Song et al., 1999). Illustrations given by Hu & Wu (1989: f 211.1-3), at least of the female, represent another species. Figures of the male may represent *D. longispinus*.
Comments. This species occurs in various habitats, from dry steppe to dry meadow (in continental regions), and to pebbly seashore and *Sphagnum* bogs in Kuriles.
Drassodes serratidens Schenkel, 1963: 07, 08, 14, 23, 31, 58, 63; ILT: U; MFLT: Sss, Sms. (Marusik & Logunov 1995).

***Drassodes villosus* (Thorell, 1856)** Map 28
[Tullgren, 1946: f. 29b, XV.191-193; Heimer & Nentwig, 1992: f. 1100]
Distribution: Trans-Palaearctic (?) boreo-nemoral range: from Europe to Khabarovsk (Ovtsharenko, 1982), north to middle Fennoscandia (Kronestedt, personal communication) and middle Ural (Esyunin & Efimik, 1996), south to Himalayas (Prószyński & Staręga, 1971). Occurrence of this species in Himalayas and Far East requires confirmation.
Drassodes villosus (Thorell, 1856): 06, 07, 08, 46, 53; MFLT: Sss, Sms; MSLT: Dbs. (Marusik & Logunov 1994).

***Drassodes* sp. 1**
Comments. Status of this species remains unclear, so far only females are know.
Drassodes sp. 1: 12, 32; MSLT: Dns.

***Drassyllus pusillus* (C.L. Koch, 1833)** Map 28
[Tullgren, 1946: f. 35b, XX.260-262; Heimer & Nentwig, 1992: f. 1172; Roberts, 1995: p.111; Song et al., 1999: f. 260C,J]
Distribution: Trans-Palaearctic nemoral range: from Europe eastward to Russian Far East, including Sakhalin and South Kuriles (Mikhailov, 1997), northward to Central Yakutia (67°N, Marusik et al., 1993) and southward to Bhutan (Platnick & Song, 1986).
Drassyllus pusillus (C.L. Koch, 1833): 63; ILT: U.

***Drassyllus vinealis* (Kulczyński, 1897)** Map 36
[Heimer & Nentwig, 1992: f. 1170; Platnick & Song: 1986: f. 61-64]
Distribution: Trans-Palaearctic disjunctive (?) nemoral range: from East Europe (Heimer & Nentwig, 1992) southeast to Tibet and Henan Prov. of China (Platnick & Song, 1986). Tuva and central Mongolia (Marusik & Logunov, 1998b) are the only known localities of this species in northern Asia, and Tuva is the northernmost record.
Drassyllus vinealis (Kulczynski, 1897): 32; MSLT: Dns.

***Echemus sibiricus* Marusik & Logunov, 1995**
[Marusik & Logunov, 1995a: f. 34-36]
Distribution: Tuvan range: known from a single locality in western Tuva only.
Echemus sibiricus Marusik & Logunov, 1995: 50; MSLT: Cxs. (Marusik & Logunov 1995).

***Gnaphosa borea* Kulczyński, 1908** Map 40
[Holm, 1970: f. 39; Ovtsharenko & Marusik, 1988: f. 7-11; Ovtsharenko et al., 1992: f. 187-188, 195-198; Platnick & Dondale, 1992: f. 276-279; Ovtsharenko & Marusik, 1995: f. 1.4, 3.5,15]
Distribution: Siberio-trans-Nearctic hypoarcto-boreo-montane range (Ovtsharenko & Marusik, 1988): from Altai in south northward to the Chaun Bay (69°N) (Ovtsharenko et al., 1992) and eastward to 177°E (Marusik et al., 1992a).
Comments. Dweller of taiga and mountain tundra.
Gnaphosa borea Kulczynski, 1908: 09, 11, 12, 14, 26, 31, 35, 36, 52, 54, 56, 63; GLT: Mwt; ILT: U; MFLT: S, Sms. (Marusik & Logunov 1995).

***Gnaphosa chola* Ovtsharenko et Marusik, 1988** Map 41
[Ovtsharenko & Marusik, 1988: f. 18-19, 21, 23, 25; Ovtsharenko et al., 1992: f. 199-202; Ovtsharenko & Marusik, 1995: f. 3.2,6,10]
Distribution: Siberian boreal range: Tuva and Krasnoyarsk Province in the west (Logunov et al., 1998; Ovtsharenko et al., 1992), northeast to upper Kolyma (Marusik et al., 1992a), southward to Arkhangai, Mongolia and Maritime Prov. of Russia (Ovtsharenko et al., 1992).
Comments. Inhabits pebbly river banks.
Gnaphosa chola Ovtsharenko & Marusik, 1988: 35; ILT: Rpb.

***Gnaphosa gracilior* Kulczyński, 1901 Map 39**
[Ovtsharenko & Marusik, 1988: f.15; Ovtsharenko et al., 1992: f. 169-170, 173-176; Ovtsharenko & Marusik, 1995: f. 3.16; Marusik & Logunov, 1995a: f. 40-46; Song et al., 1999: f. 260P, 261D]
Distribution: Siberian polyzonal range: from Xinjiang and South Gobi in the south-west northward to Nizhnyaya Tunguska River, northeast to Kolyma River mouth, Chukotka (69°N, Ovtsharenko et al., 1992) and southeast to Sakhalin (Marusik et al., 1993b) and Maritime Prov. (personal data).
Comments. Inhabits wide range of xeric biotopes, from pebbly river banks to semidesert communities.
Gnaphosa gracilior Kulczynski, 1901: 11, 12, 13, 14, 18, 19, 27, 28, 30, 31, 32, 34, 37, 38, 43, 44, 46, 49, 50, 51, 53, 55, 57, 58, 60, 63; ILT: U, Rpb, Mm, As; MFLT: Sss; MSLT: Dns, Dbs, Sds, S. (Ovtsharenko *et al*. 1992, Marusik & Logunov 1995: in part sub. *G. proxima*).

***Gnaphosa inconspecta* Simon, 1878** Map 36
[Grimm, 1985: f. 47; Ovtsharenko et al., 1992: f. 99-102]
Distribution: Trans-Palaearctic boreo-montane disjunctive range: Central Europe (France & Germany, Ovtsharenko et al., 1992), disjunction in Russian Plateau, subarctic-middle Ural (Esyunin & Efimik, 1996), southward to Tibet, north to Krasnoyarsk (Ovtsharenko et al., 1992) and eastward to Sakhalin (Marusik et al., 1992b).
Gnaphosa inconspecta Simon, 1878: 21, 34, 35, 58; ILT: U, Ism; MFLT: Mf. (Marusik & Logunov 1995).

***Gnaphosa leporina* (L. Koch, 1866)** Map 37
[Tullgren, 1946: f. 27a, XIV.173-175; Heimer & Nentwig, 1992: f. 1109; Ovtsharenko et al., 1992: 237-240; Roberts, 1995: p.117; Song et al., 1999: f. 261K, 262A]
Distribution: Euro-Baikalian boreo-nemoral range: from Europe northeast to Amga River (ca. 62°N, 133°E, Marusik et al., 1992) and southward to Turkmenistan and Central Xinjiang (Ovtsharenko et al., 1992).
Gnaphosa leporina (L. Koch, 1866): 05, 21, 26, 27, 31, 54, 56; GLT: Mwt; MFLT: Mf, Sms. (Marusik & Logunov 1995).

***Gnaphosa licenti* Schenkel, 1953** Map 37
[Ovtsharenko et al., 1992: f. 181-186; Marusik & Logunov, 1995: f. 81; Song et al., 1999: f. 261L, 262B]
Distribution: East Palaearctic (Siberio-Manchurian) range: from South Ural (Esyunin & Efimik, 1997) and east Kazakhstan and Kyrgyzstan southward to Anhui and Shandong, eastward to Korea and northward to Baikal (Ovtsharenko et al., 1992; Song et al., 1999) and Khakassia (Marusik & Logunov, 1995).
Comments. Steppe dwelling species.
Gnaphosa licenti Schenkel, 1953: 07, 09, 16, 18, 19, 53; ILT: Rpb; MFLT: Sss; MSLT: Dbs, Dns, S. (Ovtsharenko *et al*. 1992, Marusik & Logunov 1994: sub. *G. denisi*).

***Gnaphosa mandschurica* Schenkel, 1963** Map 37
[Ovtsharenko et al., 1992: f. 151-152, 155-158; Marusik & Logunov, 1995: f. 38-39, 53-54; Song et al., 1999: 261N, 262D]
Distribution: East Palaearctic polyzonal range: most wide zonal range within *Gnaphosa*: from Nepal (37°N, Ovtsharenko et al., 1992), throughout Central China, northwest to Tuva (Logunov et al., 1998), and northeast to Central Yakutia (ca. 64°N, Marusik et al., 1993).
Gnaphosa mandschurica Schenkel, 1963: 09, 11, 27, 35, 36; MFLT: Sss, Sms. (Marusik & Logunov 1995: sub. *G. glandifera*; Ovtsharenko *et al.* 1992).

***Gnaphosa microps* Holm, 1939** Map 41
[Tullgren, 1946: f. XV.182-184; Ovtsharenko & Marusik, 1988: f. 1-3; Ovtsharenko et al., 1992; f. 189-190, 203-206; Platnick & Dondale, 1992: f. 272-275; Ovtsharenko & Marusik, 1995: f. 3.4,12]
Distribution: Circum-Holarctic hypoarcto-boreal range: from highlands of Central Europe to Fennoscandia, throughout Siberia to Chukotka Peninsula, northward to Lena River mouth, and southward to Tuva and North Mongolia (Marusik et al., 1992a; Ovtsharenko et al., 1992; Logunov et al., 1998). In Nearctic south to Colorado and New England (Platnick & Dondale, 1992).
Comments. Inhabits coniferous forests, bogs and stony mountain tundra.
Gnaphosa microps Holm, 1939: 22, 35, 40, 42, 52, 54, 56; MFLT: Lf.

***Gnaphosa mongolica* Simon, 1895** Map 43
[Ovtsharenko et al., 1992: f. 153-154, 159-162; Song et al., 1999: f. 261P, 262F]
Distribution: Subtrans-Palaearctic steppe range: from Hungary eastward to south part of Maritime Prov., northward to Baikal south shore and southward to Tibet and Sichuan (Ovtsharenko et al., 1992; Song et al., 1999).
Comments. Almost all localities (except Maritime Prov.) of this species are within Eurasian steppe zone. It is one of the most common species in Mongolia and Tuva, and lives in variety of dry and open habitats.
Gnaphosa mongolica Simon, 1895: 12, 16, 18, 19, 29a, 30, 32, 33, 34, 38, 50, 53, 57, 60, 63; MFLT: Sss; MSLT: Dns, Dbs, Sds. (Ovtsharenko *et al*. 1992, Marusik & Logunov 1995: sub. *G. punctata*).

***Gnaphosa muscorum* (L. Koch, 1866)** Map 40
[Heimer & Nentwig, 1992: f. 1112; Ovtsharenko et al., 1992: f. 145-148; Platnick & Dondale, 1992: f. 264-267]
Distribution: Subcircum-Holarctic polyzonal (boreo-alpine?) range: from Europe to East-Kazakhstan Area, southward to Tibet and Sichuan and northward to Lapland and South Taimyr (Ovtsharenko et al., 1992), widespread in Nearctic (Platnick & Dondale, 1992). In Siberia east of Khentei (northward to Chukotka and eastward to Maritime Prov. and Kamchatka) there is a vicariate species, *G. similis*.
Comments. At least in Sokhondo Reserve, Chita Area, the two sibling species are sympatric but never found in the same habitat.
Gnaphosa muscorum (L. Koch, 1866): 06, 07, 08, 12, 14, 16, 18, 23, 26, 27, 28, 30, 31, 32, 35, 36, 44, 47, 52, 56, 60; GLT: Mst; ILT: U; MFLT: Sms, Sss, Bf; MSLT: S, Dbs, Cxs. (Ovtsharenko et al. 1992, Marusik & Logunov 1995).

***Gnaphosa nigerrima* L. Koch, 1878** Map 42
[Tullgren, 1946: f. 27b, XIV.176-178; Ovtsharenko & Marusik, 1988: f. 12-14; Ovtsharenko et al., 1992: f. 285-286, 293-296; Heimer & Nentwig, 1992: f. 1120; Ovtsharenko & Marusik, 1995: f. 3.7,13]
Distribution: Trans-Palaearctic hypoarcto-boreal range: in Siberia from Tuva (Logunov et al., 1998) northeast to the Chaun Bay (Marusik et al., 1992a).
Comments. Inhabits peat bogs.
Gnaphosa nigerrima L. Koch, 1877: 34; 63; ?. (Marusik & Logunov 1995).

***Gnaphosa pseudoleporina* Ovtsharenko, et al., 1992** Map 39
[Ovtsharenko et al., 1992: f. 247-250]

Distribution: North Mongolian range: from West Sayany (Logunov et al., 1998) to east Baikal (personal data).
Gnaphosa pseudoleporina Ovtsharenko, Platnick & Song, 1992: 01, 02; GLT: Mst; MFLT: Mf. (Ovtsharenko *et al*. 1992).

***Gnaphosa sticta* Kulczyński, 1908** Map 42
[Tullgren, 1946: f. 24c, XIII.165; Ovtsharenko & Marusik, 1988: 16-17, 20; Ovtsharenko et al., 1992: f. 163-168; Ovtsharenko & Marusik, 1995: f. 3.8,14]
Distribution: Trans-Palaearctic boreo-hypoarctic range. In Asia from Tuva (Logunov et al., 1998) through South Siberia eastward to Sakhalin (Marusik et al., 1992b) and northeast to East Chukotka (67°N, 177 E, Marusik et al., 1992a). In Europe found only in north Scandinavia.
Comments. Taiga dweller. Males are found only in early spring.
Gnaphosa sticta Kulczynski, 1908: 02, 03, 26, 35, 40, 42, 49, 52, 56, 57; GLT: Mwt, Sm; MFLT: Sms. (Ovtsharenko *et al*. 1992, Marusik & Logunov 1995).

***Gnaphosa tuvinica* Marusik & Logunov, 1992** Map 31
[Ovtsharenko et al., 1992: f. 91-94; Marusik & Logunov, 1995: f. 57-60]
Distribution: West Mongolian steppe range: from West Tuva (Logunov et al., 1998) southwest to Bayan-Ölgiy Aimak in Mongolia (personal data).
Gnaphosa tuvinica Marusik & Logunov in Ovtsharenko, Platnick & Song, 1992: 12, 45, 50; MSLT: Cxs. (Ovtsharenko *et al.* 1992, Marusik & Logunov 1995).

***Gnaphosa wiehlei* Schenkel, 1963** Map 40
[Ovtsharenko et al., 1992: f. 171-172, 177-180; Marusik & Logunov, 1995: f. 47-50; Song et al., 1999: f. 262L,Q]
Distribution: Mongolian range: from Tuva to eastern Mongolia and southward to Qinghai (Ovtsharenko et al., 1992; Song et al., 1999).
Gnaphosa wiehlei Schenkel, 1963: 34, 53; ILT: As; MSLT: Dbs, Dns. (Ovtsharenko *et al.* 1992, Marusik & Logunov 1995).

***Gnaphosa* sp. 1**
Comments. Apparently it is a new species, closely related to hypoarctic species, *G. orites* Chamberlin, 1922.
Gnaphosa sp. 1 (*cf. orites*): 47; GLT: Mst

***Haplodrassus cognatus* (Westring, 1862)** Map 43
[Tullgren, 1946: f. 31c, XVII.221-224; Heimer & Nentwig, 1992: 1130]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Hokkaido, north to north Ural and Tomsk, and south to Greece (Prószyński & Staręga, 1971; Ovtsharenko, 1982; Esyunin & Efimik, 1996; Tsurusaki, personal communication).
Haplodrassus cognatus (Westring, 1862): 14, 31; MFLT: Sgg.

***Haplodrassus moderatus* (Kulczyński, 1897)** Map 45
[Tullgren, 1946: f. 31a, XVI. 214-2216; Heimer & Nentwig, 1992: f. 1132; Marusik & Logunov, 1995a: f. 76-80]
Distribution: Trans-Palaearctic boreo-nemoral range: from Central Europe (NH) to Altai and Tuva, northward to the mid-Vilyuy (63°N), eastward to the Kamchatka Peninsula (Marusik et al., 1996) and southward to North Mongolia (Marusik & Logunov, 1998b).

Comments. Inhabits bogs and moist meadows.
Haplodrassus moderatus (Kulczynski, 1897): 07, 08, 14, 31, 40, 56, 63; MFLT: ?. (Marusik & Logunov 1995).

***Haplodrassus pugnans* (Simon, 1880)** Map 45
[Ovtsharenko & Marusik, 1988: f. 56-58; Ovtsharenko & Marusik, 1995: f. 2.5-6; Song et al., 1999: 263C,K]
Distribution: Siberio-Manchurian polyzonal range: from Tuva and Khakassia in the west (Marusik & Logunov, 1995a) throughout whole Mongolia southward to Qinghai (Song et al., 1999), southeast to Japan (Tsurusaki, personal communication), north to Lena River (67°N, Marusik et al., 1993) and Kolyma River mouth (personal data).
Comments. Dweller of xeric and warm biotopes.
Haplodrassus pugnans (Simon, 1880): 12, 17, 27, 30, 34, 43, 46, 50, 52, 53, 60, 63; ILT: Ism; MFLT: Sss; MSLT: Dns, S. (Marusik & Logunov 1995).

***Haplodrassus signifer* (C.L. Koch, 1839)** Map 46
[Tullgren, 1946: f. 30a, XVI. 197-200; Heimer & Nentwig, 1992: f. 1125; Roberts: 106; Platnick & Dondale, 1992: f. 322-325; Ovtsharenko & Marusik, 1995: f. 2.7-8; Marusik et al., 1996: f. 66-68, 70]
Distribution: Circum-Holarctic polyzonal range: all of Europe, widely distributed in Siberia (Marusik et al., 1996), from Altai and Tuva in the southwest, toward to Kolyma River mouth and northeast to Iultin Town (67°N, Chukotka Peninsula) (Marusik et al., 1962a; personal data). Distribution limits in Nearctic are unclear. We think there are several species in North America treated as *H. signifer*.
Comments. Dweller of bogs and moist meadows within taiga and mountain tundra belts.
Haplodrassus signifer (C.L. Koch, 1839): 08, 22, 26, 31, 40, 42, 48, 52, 54, 56; MFLT: Mf, Lf, Sms. (Marusik & Logunov 1995).

***Haplodrassus soerenseni* (Strand, 1900)** Map 47
[Tullgren, 1946: f. 30c, XVII. 209-213; Ovtsharenko & Marusik, 1988: f. 48, 51-52; Heimer & Nentwig, 1992: f. 1127; Roberts, 1995: p.108; Ovtsharenko & Marusik, 1995: f. 2.9-10]
Distribution: Trans-Palaearctic boreo-nemoral range (Marusik et al., 1995): North and Central Europe (Heimer & Nentwig, 1992), through the Russian Plain to Altai and Tuva (Marusik & Logunov 1995b), southward to Mongolia, north to the Vilyuy River (64°N) and east to upper Kolyma (Ovtsharenko & Marusik, 1988).
Comments. Inhabits leaf litter.
Haplodrassus soerenseni (Strand, 1900): 02, 04, 08, 11, 31, 35, 36, 63; GLT: Sm; MFLT: Sms, Sm. (Marusik & Logunov 1995).

***Haplodrassus* sp**.
Comments. Apparently it is a new species known for us by both sexes. Its distribution restricted to eastern Tuva. All specimens were found in deciduous tree stands with herbaceous vegetation.
Haplodrassus sp. 1: 58, 63; ILT: U.

***Micaria aenea* Thorell, 1871** Map 46
[Tullgren, 1946: f. 20c, XI.138; Holm, 1978: f. 13-16; Wunderlich, 1980: f. 5, 26a-d, 48a-b; Heimer & Nentwig, 1992: f. 1140; Platnick & Dondale, 1992: f. 60-63; Mikhailov & Marusik, 1995: 33-34, 38-39]

Distribution: Circum-Holarctic boreo-nemoral range (Marusik et al., 1995) : Central and Northern Europe (Heimer & Nentwig, 1992) toward Tuva (Logunov et al., 1998), Altai (Marusik et al., 1996) and Mongolia (Marusik & Logunov, 1998b), northeast to upper Kolyma (62°N, Mikhailov, 1987). In Nearctic known from Alaska to Newfoundland, south to Utah, Colorado, and Maine (Platnick & Dondale, 1992).
Micaria aenea Thorell, 1871: 08, 63; ILT: U; MFLT: Sms.

***Micaria alpina* L. Koch, 1872** Map 50
[Tullgren, 1946: f. 20d, XI.139-141; Holm, 1978: f. 10-12, 18-19; Heimer & Nentwig, 1992: f. 1141.1-3; Platnick & Dondale, 1992: f. 92-95; Mikhailov & Marusik, 1995: f. 29-30, 36; Roberts, 1995: p.120]
Distribution: Subcircum-Holarctic boreo-hypoarctic range. In Siberia northeast to upper Amguema (67°N) and Lena River delta (70°N), and southwest to Tuva (Logunov et al., 1998). In Nearctic recorded north of 55°N (Platnick & Dondale, 1992).
Comments. First recorded from Tuva by Danilov (1993) but exact locality was not mentioned.
Micaria alpina L. Koch, 1872: 02, 22, 27, 31, 35, 40, 56; GLT: Mst; MFLT: Lf, Mf.

***Micaria dives* (Lucas, 1846)** Map 44
[Wunderlich, 1980: f. 1, 34a-d, 58a-c; Heimer & Nentwig, 1992: f. 1134; Roberts: p.123; Song et al., 1999: f. 264B,M]
Distribution: Trans-Palaearctic nemoral-steppe range: from Central and South Europe (Heimer & Nentwig, 1992) eastward to the Russian Far East (unpublished data) and Japan (Tsurusaki, personal communication) and southward to Indian Himalayas (personal data) and Shanxi (Song et al., 1999).
Micaria dives (Lucas, 1846): 09; ILT: Rpb; MFLT: Sms.

******Micaria fulgens* (Walckenaer, 1802)** Map 43
[Tullgren, 1946: f. X.122-124; Heimer & Nentwig, 1992: F 1135; Roberts, 1995: p.122]
Distribution: Euro-Baikalian nemoral range: from western Europe to Buryatia, north to south Fennoscandia and middle Ural, south to North Africa, Azerbaijan and Kyrgyzstan (Palmgren, 1977; Mikhailov, 1987, 1997; Esyunin & Efimik, 1996).
Comments. First recorded from Tuva by Danilov (1993), but precise locality was not given.

***Micaria guttulata* (C.L. Koch, 1839)** Map 44
[Heimer & Nentwig, 1992: f. 1138]
Distribution: Euro-Yakutian nemoral range: from Europe (from south to middle Poland) to Yakutia (Marusik et al., 1993) and south to Kyrgyzstan (Mikhailov, 1987). Almost unknown from the European part of Russia.
Micaria guttulata (C.L. Koch, 1839): 26; MFLT: Sms.

***Micaria lenzi* Bösenberg, 1899** Map 50
[Wunderlich, 1980: f. 6, 29a-d, 51a-c; Heimer & Nentwig, 1992: f. 1142]
Distribution: Trans-Palaearctic polyzonal (steppe?) range: from Central Europe (Heimer & Nentwig, 1992), norh to southern Sweden (Lohmander, 1950), northeast to Kolyma River mouth (160°E) (Marusik et al., 1992a; personal data) and southward to Karakoram (Danilov, 1997), Xinjiang (Song et al., 1999) and Middle Gobi (Marusik & Logunov, 1998b).

Comments. First recorded from Tuva by Danilov (1993). Precise locality was not given.
Micaria lenzi Bösenberg, 1899: 12, 13, 14, 30, 32, 34, 49, 51, 53, 58; ILT: Rpb, Bf; MSLT: Dns, Dbs.

***Micaria cf. lenzi* Bösenberg, 1899**
Comments. This seems to be a new species occurring in Tuva and central Mongolia.
Micaria sp. 1 *(cf. lenzi)*: 17; ILT: As.

***Micaria mongunica* Danilov, 1997** Map 31
[Danilov, 1997: f. 1a-b]
Distribution: Western Mongolian steppe range: from Tuva (type locality, Danilov, 1997) in the north-west, southward to Gobi-Altai and eastward to Ulan-Bator (personal data).
Micaria mongunica Danilov, 1996: 31, 60; MSLT: Cxs. (Danilov 1997).

***Micaria nivosa* L. Koch, 1866** Map 49
[Tullgren, 1946: f. 18D, XI.131-133; Heimer & Nentwig, 1992: f. 1147]
Distribution: Euro-Baikalian nemoral range: from Central Europe to Buryatia, north to north Fennoscandia and Nizhnyaya Tunguska, south to East-Kazakhstan Area (Mikhailov, 1987; Heimer & Nentwig, 1992; Danilov, 1993)
Comments. First recorded from Tuva by Danilov, 1993 but without locality data.
Micaria nivosa L. Koch, 1866: 09, 31; ILT: Rpb; MFLT: Sms.

****Micaria pulcherrima* Caporiacco, 1935** Map 49
[Danilov, 1997: f. 2a-d]
Distribution: Central Asian boreo-montane range: from Uttar-Pradesh, India (personal data) via Qinghai, Shanxi and Mongolia east to Hebei (Marusik & Logunov, 1998b; Song et al., 1999), northward to Tuva, Irkutsk Area and Buryatia (Danilov, 1997).
Comments. First recorded from Tuva by Danilov (1993) sub *M. sibirica* Danilov, 1993 (locality #30).

****Micaria pulicaria* Sundevall, 1831** Map 51
[Tullgren, 1946: f. 18c, X.125-130; Holm, 1978: f. 6-9; Heimer & Nentwig, 1992: f. 1146.1-3; Platnick & Dondale, 1992: f. 24-27; Roberts, 1995: p.122]
Distribution: Circum-Holarctic boreo-nemoral range: from Iceland (Agnarsson, 1996) and France to north Cisokhotia (160°E, 63°N), and northward to upper Kolyma (62°N, Marusik et al., 1992a) and south to Qinghai (Song et al., 1999). Widespread in Nearctic (Platnick & Dondale, 1992), from Alaska to Newfoundland, south to California and Texas (Dondale et al., 1997).
Comments. First recorded from Tuva by Danilov (1993). Precise locality was not indicated.

***Micaria rossica* Thorell, 1875** Map 51
[Wunderlich, 1980: f. 70a-c; Heimer & Nentwig, 1992: f. 1137; Platnick & Dondale, 1992: f. 44-47; Mikhailov & Marusik, 1995: f. 27-28, 35]
Distribution: Trans-Palaearctic-West Nearctic polyzonal range: from Central Europe northeast to Kolyma River mouth (68.5°N, 162°E, Marusik et al., 1992a) and southward to Inner Mongolia and Shaanxi (Danilov, 1997). In Nearctic lives in a western half, from Alaska to California (Platnick & Dondale, 1992).
Comments. First recorded from Tuva by Danilov (1993) but without locality data.

Micaria rossica Thorell, 1875: 12, 36, 40, 48, 52; MSLT: Dbs; MFLT: Sss, Sms.

***Micaria cf. rossica* Thorell, 1875**
Comments. This species is closely related to *M. rossica*. It is found from Tuva to Mongolia (Marusik & Logunov, 1998b). It is possibly conspecific with *M. taiguica* Tu & Zhu, 1986 or another Chinese species (*M. fagei* Schenkel, 1963, *M. berlandi* Schenkel, 1963) or Altaian (*M. quinquenotata* Simon, 1895) species recently synonymised with *M. rossica* by Danilov (1997) and Wunderlich (1980).
Micaria sp. 2 (*cf. rossica*): 12, 32, 34, 53, 58, 63; ILT: Ism, As, Bf; MSLT: Dns, Sds.

****Micaria tripunctata* Holm, 1978** Map 52
[Holm, 1978: f.1-5; Wunderlich, 1980: f. 17a-c, 39; Platnick & Shadab, 1988: f. 6-9; Platnick & Dondale, 1992: f. 28-31]
Distribution: Trans-Palaearctic-West Nearctic boreal range: from Fennoscandia to Yakutia, and Maritime Prov. (personal data), north to Polar Ural, and south to Tuva and Chita Area (Mikhailov, 1987; Danilov, 1993; Marusik et al., 1993). In Nearctic known from Alaska to northern Manitoba (Dondale et al., 1997).
Comments. First recorded from Tuva by Mikhailov (1987), locality #55, and then by Danilov (1993) but we missed these records.
Micaria tripunctata Holm, 1978: 31, 40, 42, 54, 63; ILT: U, Mm.

***Micaria tuvensis* Danilov, 1993** Map 35
[Danilov, 1993: f.1-3]
Distribution: Mongolian steppe-desert range: South Siberia from Tuva to Buryatia (Danilov, 1997) southward to Middle Gobi (personal data) and inner Mongolia (Song et al., 1999).
Micaria tuvensis Danilov, 1993: 09, 31, 53, 58, 63; ILT: Ism; MFLT: Sms; MSLT: Sds, Dbs. (Danilov 1993).

***Parasyrisca asiatica* Ovtsharenko et al., 1995** Map 33
[Ovtsharenko et al., 1995: f. 45-61]
Distribution: West Mongolian range: South Altai, Western Tuva and Bayan-Ölgiy (Ovtsharenko et al., 1995).
Parasyrisca asiatica Ovtsharenko, Platnick & Marusik, 1995: 39, 43, 45, 47, 50, 60, 61; GLT: Mst; MSLT: Cxs, S; MFLT: S. (Ovtsharenko *et al*. 1995).

***Parasyrisca belengish* Ovtsharenko *et al.*, 1995** Map 35
[Ovtsharenko et al., 1995: f. 75-76]
Distribution: Tuvan range: known from south-central and south-eastern Tuva only.
Parasyrisca belengish Ovtsharenko, Platnick & Marusik, 1995: 27, 44, 46; MFLT: Sss. (Ovtsharenko *et al*. 1995).

***Parasyrisca hippai* Ovtsharenko *et al.*, 1995** Map 38
[Ovtsharenko et al., 1995: f. 36-37]
Distribution: Western Mongolian range: from eastern Altai to north-central Tuva.
Parasyrisca hippai Ovtsharenko, Platnick & Marusik, 1995: 09, 43; MFLT: S, Sss. (Ovtsharenko *et al.* 1995).

***Parasyrisca logunovi* Ovtsharenko *et al.*, 1995**
[Ovtsharenko et al., 1995: f. 62-66]
Distribution: Western Tuvan range: known from a single locality so far.

Parasyrisca logunovi Ovtsharenko, Platnick & Marusik, 1995: 47; GLT: Mst. (Ovtsharenko *et al*. 1995).

***Parasyrisca potanini* Schenkel, 1963** Map 33
[Ovtsharenko et al., 1995: f. 7-11]
Distribution: Mongolian range: from Qinghai, north-central China (Ovtsharenko et al., 1995), via Central Mongolia northwest to Tuva (Logunov et al., 1998).
Parasyrisca potanini Schenkel, 1963: 09, 11, 17, 34, 49, 51, 58, 63; ILT: Rpb, As, Bf; MSLT: Dbs, S. (Marusik & Logunov 1995: sub. *P. lugubris*; Ovtsharenko *et al*. 1995).

***Parasyrisca schenkeli* Ovtsharenko & Marusik, 1988 Map 38**
[Ovtsharenko et al., 1995: 12-16]
Distribution: Mongolian range: from Gansu, north-central China, north-westward to East-Kazakhstan Area (Ovtsharenko et al., 1995) and Tuva (Logunov et al., 1998), and eastward to Sukhebator (Ovtsharenko et al., 1995).
**Parasyrisca schenkeli* Ovtsharenko & Marusik, 1988: 49, 53; ILT: Rpb; MSLT: Dbs.

***Parasyrisca tyshchenkoi* Ovtsharenko et al., 1995** Map 55
[Ovtsharenko & Marusik, 1988: f. 38, 43, 49; Ovtsharenko & Marusik, 1995: f. 2.16-17; Ovtsharenko et al., 1995: f. 26-30]
Distribution: Siberian hypoarctic range: from Tuva northeast to upper Kolyma (Ovtsharenko et al., 1995).
Parasyrisca tyshchenkoi Ovtsharenko, Platnick & Marusik, 1995: 19; MFLT: ?. (Ovtsharenko *et al*. 1995).

***Parasyrisca ulykpani* Ovtsharenko et al., 1995** Map 34
[Ovtsharenko et al., 1995: f. 144-146]
Distribution: Western Mongolian range: besides three Mongolian aimaks, known from Tuva (Ovtsharenko et al., 1995).
Comments. All specimens were found in mountain tundra and in forest close to the timberline.
Parasyrisca ulykpani Ovtsharenko, Platnick & Marusik, 1995: 26, 35, 54; GLT: Mwt; MFLT: Mf. (Ovtsharenko *et al.* 1995).

***Phaeocedus braccatus* (L. Koch, 1966)** Map 49
[Heimer & Nentwig, 1992: f. 1151; Kamura, 1995: f. 1-3; Roberts, 1995: p.119]
Distribution: Trans-Palaearctic nemoral range: from Europe eastward to Japan (Tsurusaki, personal communication) and southward to Azerbaijan (Mikhailov, 1997), Mongolia and Honshu.
Phaeocedus braccatus (L. Koch, 1866): 11, 12, 17, 27, 29, 30, 32, 34, 51, 53, 63; ILT: Rpb, Ism; MFLT: Sss, Sms; MSLT: Dns, Dbs, S. (Marusik & Logunov 1995).

***Poecilochroa variana* (C.L. Koch, 1839)** Map 48
[Tullgren, 1946: f. 37, XXI.272-274; Heimer & Nentwig, 1992: f. 1153; Roberts, 1995: p.118]
Distribution: Euro-Mongolian nemoral range: from western Europe to Tuva, north to south Fennoscandia, and south to Uzbekistan (Tullgren, 1946; Mikhailov, 1997)
Poecilochroa variana (C.L. Koch, 1839): 09; ILT: Rpb.

***Tuvadrassus tegulatus* (Schenkel, 1963)** Map 48
[Marusik & Logunov, 1995a: f. 83-87]

Distribution: Mongolian range: known only from Tuva and Gansu (Marusik & Logunov, 1995a; Song et al., 1999).
Tuvadrassus tegulatus (Schenkel, 1963): 50, 60, 63; MSLT: Sds, Cxs. (Marusik & Logunov 1995).

***Urozelotes yutian* Platnick & Song, 1986** Map 48
[Platnick, Song, 1986: f. 41-44; Marusik & Logunov, 1995: 88-90]
Distribution: Euro-Yakutian disjunctive (?) steppe-desert range: from Central Europe (personal data) north-eastward to Central Yakutia (Marusik et al., 1993) and south-eastward to Khentei Aimak (personal data) and Xinjiang (Platnick & Song, 1986). There is a disjunction between Central Europe and Urals.
Comments. All specimens collected by us were taken from steppe and semi-desert habitats.
Zelotes yutian Platnick & Song, 1986: 19, 32, 34, 48, 50, 51, 57; ILT: Mm, Rpb. (Marusik & Logunov 1995).

***Zelotes baltistanus* Caporiacco, 1935** Map 47
[Loksa, 1965: f. 30-31; Ovtsharenko & Marusik, 1988: f. 64-65; Ovtsharenko & Marusik, 1995: f. 1.14-15]
Distribution: Central Asian-Siberian (East Palaearctic) polyzonal (steppe) range (Marusik et al., 1996): from the Karakoram Mt. Range through Mongolia and Tuva northward to upper Yana (66°N) and eastward to upper Kolyma (Ovtsharenko & Marusik, 1988; Marusik & Logunov, 1995a).
Comments. Occupies xeric habitats.
Zelotes baltistanus Caporiacco, 1934: 27, 28, 30, 34, 50, 53, 63; ILT: U; MFLT: Sss; MSLT: Dns, Dbs, Sds. (Marusik & Logunov 1995).

***Zelotes barkol* Platnick & Song, 1986** Map 55
[Platnick & Song, 1986: f. 11-14; Song et al., 1999: 266B,J]
Distribution: West Mongolian range: from Xinjiang (Platnick & Song, 1986) and East-Kazakhstan Area (Eskov & Marusik, 1995) to Tuva and Mongolia (Marusik & Logunov, 1995a). Exact locality in Mongolia is unknown.
Zelotes barkol Platnick & Song, 1986: 20, 49; ILT: U. (Marusik & Logunov 1995).

***Zelotes exiguus* (Müller & Schenkel, 1895)** Map 47
[Holm, 1968: f. 32-33; Heimer & Nentwig, 1992: f. 1162]
Distribution: Trans-Palaearctic nemoral range: from France (Prószyński & Staręga, 1971) to Maritime Province (personal data) and Hokkaido (Tsurusaki, personal communication), north to southern Sweden and Finland (Holm, 1968) and middle Ural (Esyunin & Efimik, 1996).
Comments. Inhabits steppe biotopes and dry meadows.
Zelotes exiguus (Müller & Schenkel, 1895): 09, 14, 34, 53; ILT: Ism; MSLT: Dbs, S.

***Zelotes fratris* Chamberlin, 1920** Map 52
[Ovtsharenko & Marusik, 1988: 26, 29-31, 37; Platnick & Dondale, 1992: 104-107]
Distribution: Siberio-Nearctic polyzonal range: from Altai in the west (Marusik et al., 1996) southeast to Maritime Prov. and northward to 62°N in Magadan Area (Marusik et al., 1996; Mikhailov, 1997). In Nearctic known from Alaska to Newfoundland, south to California and North Carolina (Dondale et al., 1997).

Zelotes fratris Chamberlin, 1920: 01, 04, 19; ILT: Rpb; GLT: Sm; MFLT: ?. (Marusik & Logunov 1995: in part sub. *Z. cf. fratris*).

***Zelotes potanini* Schenkel, 1963** Map 54
[Platnick, Song, 1986: f. 37-40; Eskov, Marusik, 1995: 32, 37-38, 42-43]
Distribution: Siberio-Manchurian nemoral-steppe range (Eskov & Marusik, 1995): from South Ural (Esyunin & Efimik, 1996) and East Kazakhstan Area northward to Central Yakutia (Marusik et al., 1993) and eastward to Japan and southward to Shandong Henan (Platnick & Song, 1986; Song et al., 1999).
Comments. This species occurs exclusively in xeric habitats like dry meadows, steppes and semi-deserts.
Zelotes potanini Schenkel, 1963: 02, 09, 10, 12, 13, 17, 18, 19, 27, 29a, 30, 31, 32, 34, 35, 36, 44, 49, 50, 53, 57, 58, 60, 62; GLT: Mst; ILT: As, U, Mm, Rpb; MFLT: Sss, Sms; MSLT: Dns, Dbs, S. (Marusik & Logunov 1995).

***Zelotes puritanus* Chamberlin, 1922** Map 53
[Ovtsharenko & Marusik, 1988: f. 22, 24, 27; Heimer & Nentwig, 1992: f. 1163; Platnick & Dondale, 1992: f. 148-151; Eskov & Marusik, 1995: 33, 39-40, 44; Ovtsharenko & Marusik, 1995: f. 1.11-13]
Distribution: Circum-Holarctic disjunctive polyzonal (steppe) range: mountains of Central Europe, South Siberia northward along azonal steppes to 62°N in Yakutia and Magadan Area (Marusik et al., 1992a, 1993). In Nearctic known from Alaska to New Brunswick, south to California and Massachusetts (Dondale et al., 1997).
Comments. All specimens available for our study were collected in xeric meadows or steppe habitats in Siberia and Yukon Territory.
Zelotes puritanus Chamberlin, 1922: 27, 30; MFLT: Sss.

***Zelotes sula* Lowrie et Gertsch, 1955** Map 53
[Ovtsharenko & Marusik, 1988: f. 28, 32-34, 36; Platnick & Dondale, 1992: f. 112-115; Ovtsharenko & Marusik, 1995: f. 1.16, 2.1]
Distribution: Siberio-Nearctic boreal range: from Tuva to upper Kolyma (Marusik & Logunov, 1995a). In Nearctic recorded from Alaska and Labrador south to Utah and northern New England (Platnick & Dondale, 1992).
Zelotes sula Lowrie & Gertsch, 1955: 09, 11, 19, 20, 27, 31; MFLT: Lf, S, Sss, Sms. (Marusik & Logunov 1995).

HAHNIIDAE

***Cryphoeca silvicola* (C.L. Koch, 1834)** Map 54
[Palmgren, 1977: f. 1.16-19; Heimer & Nentwig, 1992: f. 931; Roberts, 1995: p.252]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Sakhalin (Marusik et al., 1992b), north to Lapland (Palmgren, 1977) and Nizhnyaya Tunguska (Eskov, 1988c), south to Yugoslavia (Nikolić, 1981).
Comments. Inhabits leaf litter in flood plain mixed forest.
Cryphoeca silvicola (C.L. Koch, 1834): 40; MFLT: Lf.

***Hahnia ononidum* Simon, 1875** Map 53
[Opell & Beatty, 1976: f. 89-93; Palmgren, 1977: f. 2.10-15]

Distribution: Trans-Palaearctic-W Nearctic boreal species: from western Europe northeast to upper Kolyma (Marusik et al., 1992a), northward to north Scandinavia (Palmgren, 1977) and Lena River mouth (Marusik et al., 1993). In Nearctic restricted to the West only.
Comments. Survey of specimens from distant populations (Finnish, Tuvan, Ural, Kolyman, Mongolian, Yukon) shows that it is a complex species (or series of vicariating species). Inhabits forests with moist litter.
Hahnia sp. 1 *(cf. ononidum)*: 02, 08, 09, 23, 26, 27, 31, 36, 40, 42, 56, 58; GLT: Mwt; MFLT: Mf, Lf, Sgg.

LINYPHIIDAE

***Abacoproeces saltuum* (L. Koch, 1872)** Map 52
[Wiehle, 1960: f. 167-175; Palmgren, 1976: f. 8.20-24; Heimer & Nentwig, 1992: f. 316]
Distribution: Euro-Baikalian boreo-nemoral range: from western Europe to Baikal, north to Lapland (Palmgren, 1976), south to Yugoslavia (Nikolić, 1981) and south Siberia (Eskov, 1994).
Abacoproeces saltuum (L. Koch, 1872): 58, 63; ILT: U.

***Abiskoa abiskoensis* (Holm, 1945)** Map 62
[Holm, 1945: f. 15a-d; Palmgren, 1975: f. 11.1-4; Saaristo & Tanasevitch, 2000: f. 23-27]
Distribution: Trans-Palaearctic boreal range: from Scandinavia (Palmgren, 1975), via northern Ural (Esyunin & Efimik, 1996) to upper Kolyma (Marusik et al., 1992a) and Kamchatka (Eskov, 1994), south to south Ural, Tuva, south Cisbaikalia and Manchuria (Jilin: Li & Tao, 1995).
Lepthyphantes abiskoensis Holm, 1945: 07; MFLT: Mf.

***Agnyphantes expunctus* (O.P.-Cambridge, 1875)** Map 62
[Palmgren, 1975: f. 10.1-4; Heimer & Nentwig, 1992: f. 498; Saaristo & Tanasevitch, 2000: f. 3, 7]
Distribution: Trans-Palaearctic boreo-nemoral range (Marusik 1994): Middle and North Europe, northeast to Chukotka (ca 67°N, 177°E, Marusik et al., 1992), southward to Xinjiang (Li & Tao, 1995) and Khubsugul Lake in Mongolia (personal data).
Lepthyphantes expunctus (O.P.-Cambridge, 1875): 35, 56; MFLT: Lf (?).

***Agyneta affinisoides* (Tanasevitch, 1984)** Map 62
[Tanasevitch, 1984b: f. 2a-æ]
Distribution: Siberian hypoarcto-boreal range: from Polar Ural southward to Uburkhangai, northeast to upper Kolyma (ca 63°N, 152°E, Marusik et al., 1992a).
Agyneta affinisoides Tanasevitch, 1984: 26; GLT: Mwt. (Eskov 1992).

***Agyneta* sp. 1**
Comments. It seems to be an undescribed species.
Agyneta sp. 1 (*cf. affinisoides*): 42, 52; GLT: ?.

***Agyneta allosubtilis* Loksa, 1965** Map 61
[Loksa, 1965: f. 1-2; Hippa, Oksala, 1985: 2g-h, 5c,f-h]
Distribution: Siberio-trans-Nearctic hypoarcto-boreal: from Polar Ural (Koponen et al., 1998) south to Altai (Hippa & Oksala, 1985) and Central Mongolia, northeast to Chukotka (sub *A. subtilis,* 178°E, 68°N, Marusik et al., 1992a). In Nearctic known from Yukon to Newfoundland, south to Alberta and Maine (Dondale et al., 1997).

Agyneta allosubtilis Loksa, 1965: 04, 07, 26, 27, 30, 31, 35, 52; MFLT: Mf, Lf, Sms. (Eskov 1992).

***Agyneta beata* (O.P.-Cambridge, 1906)** Map 61
[Palmgren, 1975: f. 6.16-17; Roberts, 1987: f. 62a]
Distribution: Trans-Palaearctic boreal range: from western Europe to Sakhalin and North Cisokhotia, north to Lapland (Kronestedt, personal communication) and 60°N in Siberia.
Agyneta beata (O.P.-Cambridge, 1906): 31; MFLT: Mf.

***Agyneta birulaioides* Wunderlich, 1995** Map 57
[Wunderlich, 1995: f. 1-9]
Distribution: Mongolian steppe range: from Central Tuva (Logunov et al., 1998) south-east to South Gobi.
Comments. Inhabits xeric biotopes.
? *Agyneta birulaioides* Wunderlich, 1995: 12, 34, 40; MSLT: S, Dns.

***Agyneta conigera* (O.P.-Cambridge, 1863)** Map 54
[Roberts, 1987: f. 60e]
Distribution: Trans-Palaearctic boreo-nemoral range: whole Europe (from North Fenno-scandia to Caucasus Eskov, 1994), northeast to Okhotsk (Marusik et al., 1992) and southward to Central Aimak.
Agyneta conigera (O.P.-Cambridge, 1863): 07; MFLT: Mf. (Eskov 1992).

***Agyneta fuscipalpis* (C. L. Koch, 1836)** Map 63
[Wiehle, 1956: f. 294-206]
Distribution: Euro-Baikalian nemoral-montane range: from Europe to Yenisei River (including Tuva), southward to Central Asia (Eskov, 1994) and Bayankhongor (Marusik & Logunov, 1998b).
New locality: 09.
Agyneta fuscipalpus (C.L. Koch, 1836): 26; GLT: Mwt.

***Agyneta kaszabi* (Loksa, 1965)** Map 56
[Loksa, 1965: f. 9-12]
Distribution: West Mongolian range: from East-Kazakhstan Area via Tuva eastward to Central Mongolia (Eskov, 1994).
Agyneta kaszabi (Loksa, 1965): 50, 51; ILT: As; MSLT: Cxs. (Eskov 1992).

***Agyneta levii* Tanasevitch, 1984** Map 57
[Tanasevitch, 1984b: f. 4a-з]
Distribution: Middle Siberian boreal range: from middle Yenisei River (Tanasevitch, 1984b) to lower River Lena (Marusik et al., 1993) and south to northern Tuva (Eskov, 1992)
Agyneta levii Tanasevitch, 1984: 12; MSLT: Dns. (Eskov 1992).

***Agyneta olivacea* Emerton, 1882**
[Roberts, 1987: f. 60d; Hippa & Oksala, 1985: 1b,e, 2e-f, 3a,f]
Distribution: Circum-Holarctic hypoarcto-nemoral range (Marusik et al., 1995): all of Europe and Siberia (Eskov, 1994), southward to Central Mongolia (Marusik & Logunov, 1998b). In Nearctic known from Yukon to Newfoundland, south to southern Alberta and New Hampshire (Dondale et al., 1997).

Comments. Inhabits moist forest litter but may also occur in bogs.
Agyneta olivacea (Emerton, 1882): 02, 04, 03, 07, 14, 22, 27, 31, 35, 36, 40, 42, 44, 52, 54, 56, 63; GLT: Mst, Sm; ILT: Bf; MFLT: Mf, Lf. (Eskov 1992).

***Agyneta pseudosaxatilis* (Tanasevitch, 1984)** Map 56
[Tanasevitch, 1984b: f. 1a-ж; Marusik et al., 1996: f. 4-6]
Distribution: Trans-Siberian boreal range: from South Yamal to upper Kolyma and Kamchatka, north to Lena River mouth, and southward to Mongolia and Cisamuria (Eskov, 1994; Marusik et al., 1992a).
Agyneta pseudosaxatilis Tanasevitch, 1984: 23, 35, 56; MFLT: ?. (Eskov 1992).

***Agyneta trifurcata* Hippa et Oksala, 1985** Map 64
[Hippa & Oksala, 1985: 1c,f,h, 3d,i,, 6b-d]
Distribution: Trans-Palaearctic hypoarcto-boreal range: from northern Lapland (Hippa & Oksala, 1985) to Chukotka (Marusik et al., 1992a), north to Putorana Plateau (Eskov, 1988c), south to Tuva and northern Sakhalin (Marusik et al., 1992b).
Agyneta trifurcata Hippa & Oksala, 1985: 35, 40, 52, 54, 56; MFLT: ?.

***Allomengea dentisetis* (Grube, 1861)** Map 65
[Helsdingen, 1974: f. 17-23; Tao et al., 1995: 1-6; Song et al., 1999: f. 85G-I]
Distribution: Siberio-Nearctic boreo-nemoral range: from South Ural, along South Siberia, in Yakutia along azonal steppes to ca 60°N, 132°E (Marusik et al., 1993), eastward to Kamchatka (Eskov, 1994) and southward to Jilin and Qinghai (Tao et al., 1995; Song & al., 1999). An isolated population occurs in North Tien Shang (Tanasevitch, 1989a). In Nearctic known from Alaska to Newfoundland, south to Colorado, and New England (Buckle, personal communication).
Allomengea dentisetis (Grube, 1861): 17, 55; ILT: Mm. (Eskov 1992).

***Allomengea scopigera* (Grube, 1859)** Map 65
[Helsdingen, 1974: f. 8-11; Roberts, 1987: f. 87a,c]
Distribution: Trans-Palaearctic-West Nearctic boreo-nemoral-montane range: Europe (Middle and Northern) including Caucasus, highland of Central Asia, northward to Central Yakutia, eastward to north Kamchatka (Eskov, 1994) and southward to Mongolia (Loksa, 1965). In Nearctic known from Alaska and Yukon Territory to Manitoba (Dondale et al., 1997).
Comments. Inhabits flood plain biotopes with shrubs and herbaceous vegetation .
Allomengea scopigera (Grube, 1859): 17, 29, 31; ILT: Mm. (Eskov 1992).

***Anguliphantes cerinus* (L. Koch, 1879)** Map 56
[Holm, 1973: f. 63-64; Tanasevitch, 1986: f. 104-107; Saaristo & Tanasevitch, 1996: f. 15i]
Distribution: middle Siberian boreal range: from Novosibirsk (Eskov & Marusik, 1994) and East-Kazakhstan Area (Tanasevitch, 1986) to western Yakutia (Marusik et al., 1993), north to middle Yenisei River (Eskov, 1988c) and upper Vilyuy River, and south to East-Kazakhstan area and Tuva.
Anguliphantes cerinus (L. Koch, 1879): 02, 04; GLT: Sm. (Eskov 1992: sub. *Lepthyphantes c.*).

***Anguliphantes dybowskii* (O.P.-Cambridge, 1873)** Map 64
[Helsdingen, 1978: f. 1-2; Pakhorukov, 1981: f. 16-19; Saaristo & Tanasevitch, 1996: f. 15d]

Distribution: Trans-Siberian boreal range: from Ural northeast to upper Kolyma (ca 63°N, Marusik et al., 1992a) and Kamchatka, southward to South Sakhalin (Eskov, 1994) and Mongolia (Marusik & Logunov, 1998b).
Comments. Inhabits coniferous and mixed forests with moist litter.
Anguliphantes dybowskii (O.P.-Cambridge, 1873): 05; MFLT: Mf. (Eskov 1992: sub. *Lepthyphantes d.*).

***Anguliphantes karpinskii* (O.P.-Cambridge, 1873)** Map 74
[Tanasevitch, 1986: f. 108 - 113; Tao et al., 1995: 117-120]
Distribution: Siberio-Manchurian boreo-nemoral range: from Yenisei (Eskov, 1994) northeast to upper Kolyma (ca 63°N, Marusik et al., 1992a), eastward to Kamchatka (Eskov, 1994) and southward to Mongolia and north-east China (Tao et al., 1995).
Comments. Inhabits various forests with mesophytic herbaceous vegetation.
Anguliphantes karpinskii (O.P.-Cambridge, 1873): 07, 35; MFLT: Mf. (Eskov 1992: sub. *Lepthyphantes k.*).

***Anguliphantes sibiricus* (Tanasevitch, 1986)** Map 69
[Tanasevitch, 1986: f. 79-81; Saaristo & Tanasevitch, 1996: f. 15g]
Distribution: Yenisei boreal range: from middle Yenisei (ca. ~ 63°N) south to West Sayany (Eskov, 1994).
Comments. Illustrations of the paratype female in the original description of this species refer to "*L." flexilis* Tanasevitch, 1986 (Eskov, 1994; Tanasevitch, personal communication).
Lepthyphantes sibiricus Tanasevitch, 1986: 02, 04; GLT: Mwt, Sm.

***Arachosinella eoroegensis* Wunderlich, 1995** Map 60
[Wunderlich, 1995: f. 53-57]
Distribution: Mongolian (?) range: from Saur Mt. Range (sub *A. strepens* Denis, 1958, Eskov & Marusik, 1995) eastward to Sukhe-Bator (Wunderlich, 1995).
Comments. Distribution of this species as well as of the only congener *A. strepens* (described from Afghanistan) is not clear. To clarify range of these species, Tien-Shang specimens of *A. strepens* (reported by Tanasevitch, 1989) will have to be compared with both species. Dweller of xeric habitats.
? *Arachosinella strepens* Denis, 1958: 14, 26, 55, 63; ILT: U; GLT: Mwt. (Eskov 1992).

***Araeoncus crassiceps* (Westring, 1861)** Map 66
[Wiehle, 1960: f. 432-438; Palmgren, 1976: 15.5-10; Roberts, 1987: f. 40b]
Distribution: Euro-Baikalian boreo-nemoral range: from western Europe to Transbaikalia (Eskov, 1992), north to Lapland (Kronestedt, personal communication) and Turukhansk (Eskov, 1988c), south to Tuva.
Araeoncus crassiceps (Westring, 1862): 34, 57; ILT: Ism.

***Araeoncus vorkutensis* Tanasevitch, 1984** Map 60
[Tanasevitch, 1984a: 4.1-8]
Distribution: West-Middle Siberian boreal range: from Ural to Vilyuy River, north to Polar Ural and Norilsk, south to West Sayany (Eskov, 1988c., 1994).
Araeoncus vorkutensis Tanasevitch, 1984: 03; GLT: Sm. (Eskov 1992).

****Archaraeoncus sibiricus* Eskov, 1988** Map 66
[Eskov, 1988d: f. 1-6]
Distribution: Siberian hypoarctic range: from Putorana Plateau to Chukotka Peninsula and southward to Tuva and Cisbaikalia (Eskov, 1988d, 1994; Marusik et al., 1992a).
Locality: 35.

***Asiophantes sibiricus* Eskov, 1993** Map 57
[Eskov, 1993: f. 5-8]
Distribution: Siberian boreal range: from Tuva to Khabarovsk, north to central Yakutia (Eskov, 1993, 1994)
Asiophantes sibiricus Eskov, 1993: 23; MFLT: Sm. (Eskov 1993).

***Bathyphantes eumenis* (L. Koch, 1879)** Map 74
[Holm, 1973: f. 52-53]
Distribution: Siberian (?) boreo-hypoarctic range: from Yenisei to Chukotka, south to south Transbaikalia and Manchuria (Eskov, 1994). South-western limit of the range is unclear, it might be Cisbaikalia (Eskov, 1994) or Tuva (Logunov et al., 1998).
Bathyphantes eumenis (L. Koch, 1879): 04, 14, 27, 31, 35, 36, 40, 44, 56; GLT: Sm, S; MFLT: Lf, Mf.

***Bathyphantes gracilis* (Blackwall, 1841)** Map 67
[Ivie, 1969: f. 1-4; Holm, 1987: f. 15-16]
Distribution: Circum-Holarctic boreo-nemoral range: from Iceland (Agnarsson, 1996) and Iberian Peninsula (Cardoso, 1999) eastward to Kamchatka (Eskov, 1994), north to Lapland (Palmgren, 1975) and Polar Ural (Esyunin & Efimik, 1996), south to Caucasus and Jilin (Eskov, 1994; Mikhailov, 1997). In Nearctic known from Alaska to Newfoundland, south to Alberta and Ontario (Buckle, personal communication).
Comments. Inhabits mesophytic meadows.
Bathyphantes gracilis (Blackwall, 1841): 23, 63; ILT: U; MFLT: Sm. (Eskov 1992).

***Bathyphantes setiger* F.O.P.-Cambridge, 1894** Map 66
[Palmgren, 1975: f. 16.8-10; Roberts, 1987: f. 70e]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Chukotka Peninsula (Marusik et al., 1992a), north to Lapland (Palmgren, 1975) and Chaun Bay in Chukotka, south to Slovakia (Gajdoš et al., 1999) and Sakhalin (Marusik et al., 1992b)
Comments. Inhabits peat bogs.
Bathyphantes setiger F.O.P.-Cambridge, 1894: 55; ILT: U. (Eskov 1992).

***Bathyphantes simillimus* (L. Koch, 1879)** Map 67
[Ivie, 1969: f. 40-43; Holm, 1973: f. 56-58]
Distribution: Circum-Holarctic boreal range: from Central Europe and Finland eastward to Chukotka (Eskov, 1994). In Nearctic known from Alaska to Greenland (Eskov, 1994).
Bathyphantes simillimus (L. Koch, 1879): 05, 07, 11, 20, 23, 26; GLT: Mwt; ILT: U; MFLT: Mf, Lf. (Eskov 1992).

*****Bishopiana glumacea* (Gao, Fei et Zhu, 1992)** Map 58
[Song et al., 1999: f. 97P-Q]
Distribution: Western Mongolian range: from NE Xinjiang (type locality) to Ubsu-Nur Lake, south-central Tuva.

Comments. Originally was placed in *Caviphantes*. While type series of this species includes 4 females and 6 males, a female was chosen as a holotype (Gao, Fei & Zhu, 1992). In fact males seems to be a real *Caviphantes*, while females belong to an other genus. Judging from males than we have on hand, Eskov's transfer (Eskov & Marusik, 1994) of this species to *Bishopiana* is possibly correct. This problem requires investigation. Inhabits xeric habitats.
Localities: 32, 34

***Bolephthyphantes index* (Thorell, 1856)** Map 68
[Palmgren, 1975: f. 9.20-22; Saaristo & Tanasevitch, 2000: f. 4, 8-9]
Distribution: Trans-Palaearctic boreal range: from Central Europe northward to Lapland and Polar Ural and eastward to upper Kolyma (Palmgren, 1975; Eskov, 1994). Record from NE China (Tao et al., 1995) may refer to another species.
Comments. Meadow dweller in taiga belt.
Bolyphantes index (Thorell, 1856): 11, 40; MFLT: Sgg. (Eskov 1992).

***Bolyphantes alticeps* (Sundevall, 1833)** Map 68
[Roberts, 1987: f. 75b,d, 76b; Tao et al., 1995: f. 11-20]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Kamchatka and Commander Islands, north to Lapland and Cispolar Ural, south to Central Europe, south Caucasus, north Tien-Shang, Jilin and Honshu (Eskov, 1994; Mikhailov, 1997).
Comments. Meadow dweller in floodplain habitats.
Bolyphantes alticeps (Sundevall, 1833): 17; ILT: Mm. (Eskov 1992).

***Carorita limnaea* (Crosby et Bishop, 1927)** Map 70
[Holm, 1968: f. 10-11; Palmgren, 1976: f. 14.1-3; Roberts, 1987: f. 53d; Heimer & Nentwig, 1992: f. 353]
Distribution: Circum-Holarctic boreal range: Middle and North Europe (Heimer & Nentwig, 1992), north to Putorana Plateau and middle Lena River (64°N) , eastward to upper Kolyma and southward to Mongolia and north-east China (Eskov, 1994). In Nearctic known in Canada and USA on both Atlantic and Pacific coasts (Eskov, 1994).
Comments. Bog dwelling species.
Carorita limnaea (Crosby & Bishop, 1927): 07, 27, 34, 63; ILT: Rpb, U; MFLT: Mf. (Eskov 1992).

***Centromerus clarus* (L. Koch, 1879)** Map 67
[Holm, 1973: f. 59-62; Eskov & Marusik, 1992b: f. 2a-c]
Distribution: Uralo-Baikalian boreal range: from Ural to Transbaikalia, north to Polar Ural and middle Yenisei River, south to Altai (Eskov & Marusik, 1992b) and north Mongolia (Marusik & Logunov, 1998b).
Centromerus clarus (L. Koch, 1879): 02, 04, 05, 07; GLT: Mwt, Sm; MFLT: Mf. (Eskov 1992, Eskov & Marusik 1992b).

***Centromerus* sp. 1**
Comments. A new species, only one male has been found so far.
Centromerus sp. 1 (*cf. amurensis*): 35; MFLT: ?.

***Ceratinella brevis* (Wider, 1834)** Map 70
[Palmgren, 1976: f. 3.13-17; Roberts, 1987: f. 2a]

Distribution: Trans-Palaearctic boreo-nemoral range: from Europe northeast to Kamchatka, southward to Central Aimak, Jilin and Japan (Eskov, 1994).
Ceratinella brevis (Wider, 1834): 07; MFLT: Mf. (Eskov 1992).

***Ceratinella wideri* (Thorell, 1871)** Map 71
[Palmgren, 1976: f. 3.24-25; Heimer & Nentwig, 1992: f. 379]
Distribution: Trans-Palaearctic boreal range: from France to upper Kolyma (Marusik et al., 1992a), north to Lapland (Palmgren, 1976) and the mid-Lena (64°N) and south to north Tien-Shang (Eskov, 1994) and Mongolia (Marusik & Logunov, 1998b).
Ceratinella wideri (Thorell, 1871): 02, 27; GLT: Mwt; MFLT: Mf, Lf.

***Cnephalocotes obscurus* (Blackwall, 1834)** Map 69
[Wiehle, 1960: f. 701-711, Palmgren, 1976: f. 17.4-5]
Distribution: Circum-Holarctic boreo-nemoral range: from Portugal (Cardoso, 1999) to Kolyma River mouth, south to south Ural and Sakhalin (Marusik et al., 1992a, 1993; Esyunin & Efimik, 1996; personal data). In Nearctic known to be distributed from Yukon Territory to Quebec (Dondale et al., 1997).
Comments. Moss and *Carex* dweller in various types of forest.
Cnephalocotes obscurus (Blackwall, 1834): 35; MFLT: Mf.

***Collinsia caliginosa* (L. Koch, 1879)** Map 63
[Holm, 1973: f. 19-21; Eskov, 1990b: f. 1-4]
Distribution: Central Asian - West-Middle Siberian boreo-alpine range: from Tien-Shang to western Yakutia, north to Norilsk, and south to Pamir (Eskov, 1990b, 1994).
Comments. Record of this species from Yakutia (Marusik et al., 1993) may refer to *C. submissa*. *C. nemenziana* Thaler, 1980, known from the Alps was reduced by Eskov (1990b) to subspecies status, so species range is wider than shown on the map. *C. caliginosa*, or closely related species occurs in Indian Himalayas, Himachal Pradesh (personal data).
Collinsia caliginosa (L. Koch, 1879): 35, 36, 52; ILT: Rpb.

***Collinsia dentata* Eskov, 1990** Map 75
[Eskov, 1990b: f. 5-10]
Distribution: Siberio-W Nearctic boreo-hypoarctic range: from Putorana Plateau to Chukotka Peninsula (Eskov, 1990b, 1994), south to Tuva. In Nearctic known only from Yukon Territory (Dondale et al., 1997).
Collinsia dentata Eskov, 1990: 3; ILT: Rpb.

***Collinsia distincta* (Simon, 1884)** Map 71
[Wiehle, 1960: f. 870-876; Roberts, 1987: f. 53b; Heimer & Nentwig, 1992: f. 451]
Distribution: Euro-Yakutian boreo-nemoral range: from Great Britain to Lena River, north to Polar Ural and lower Lena River, south to Greece, Tuva (Prószyński & Staręga, 1971; Eskov, 1990b, 1994) and western Mongolia (personal data).
New localities: 56, 59.
Collinsia distincta (Simon, 1884): 07, 52; MFLT: Mf. (Eskov 1992).

***Collinsia submissa* (L. Koch, 1879)** Map 71
[Roberts, 1987: f. 42c; Holm, 1987: f. 5-8]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to Kamchatka, north

to northern Sweden (Kronestedt, personal communication), middle Yenisei River and upper Kolyma, south to Azerbaijan, Nepal, Hebei, Korea and Honshu (Eskov, 1994).
New locality: 63.
Collinsia submissa (L. Koch, 1879): 09, 12, 31, 32, 35, 36, 48; ILT: U. (Eskov 1992: sub. *C. japonica*).

***Concavocephalus* sp. 1**
Comments. This new species is close to *C. rubens* Eskov, 1989, and is a second member of the genus. Known only from Tuva.
Concavocephalus sp. 1 (*cf. rubens*): 07a, 35, 36, 56; ILT: U; MFLT: Sm. (Eskov & Marusik 1994: sub. *C. rubens*).

***Dactylopisthes diphyus* (Heimer, 1987)** Map 68
[Heimer, 1987: f. 4-8; Song et al., 199: f. 91A-D]
Distribution: West Mongolian range?: from Xinjiang (Song et al., 1999) to Bayankhongor (personal data) and north to Tuva.
Dactylopisthes diphyus (Heimer, 1987): 34, 57; ILT: Ism.

***Dactylopisthes video* (Chamberlin et Ivie, 1947)** Map 75
[Chamberlin & Ivie, 1947: f. 25-27, 82; Tanasevitch, 1984a: f. 5.1-10; Wunderlich, 1995: f. 59-68]
Distribution: Siberio-northeast Nearctic range: from Polar Ural, southward to Tuva and Mongolia and northeast to Chukotka Peninsula (Eskov, 1994; Marusik et al., 1992a). In Nearctic known from Alaska and Yukon Territory only (Dondale et al., 1997).
Dactylopisthes video (Chamberlin & Ivie, 1947): 63; ILT: U.

***Decipiphantes decipiens* (L. Koch, 1879)** Map 76
[Holm, 1945: f. 18a-b; Palmgren, 1975: 13.13-14; Wunderlich, 1995: f. 39; Saaristo & Tanasevitch, 1996: f. 16d]
Distribution: Euro-Baikalian hypoarcto-boreal range: from north Fennoscandia and Yamal Peninsula (Tanasevitch 1987) southward to Altai (Marusik et al., 1996), northeast to Putorana Plateau (Eskov 1988b, 1992) and southeast to Central Aimak (Wunderlich, 1995).
Decipiphantes decipiens (L. Koch, 1879): 07, 11, 23, 26, 27, 31, 35, 40, 52, 56; GLT: Mwt; MFLT: Mf. (Eskov 1992: sub. *Lepthyphantes d.*).

***Dicymbium facetum* (L. Koch, 1879)** Map 58
[Holm, 1973: f. 22]
Distribution: Siberian boreal range: from Yamal Peninsula eastward to upper Kolyma (Eskov, 1994) and southward to Tuva (Logunov et al., 1998) and Mongolia (Marusik & Logunov, 1998b).
Dicymbium facetum (L. Koch, 1879): 07, 56; MFLT: Mf. (Eskov 1992).

***Diplocentria bidentata* (Emerton, 1882)** Map 69
[Heimer & Nentwig, 1992: f. 292; Millidge, 1984: f. 131-132, 135, 141, 146, 148-149, 156, 160]
Distribution: Circum-Holarctic boreo-nemoral range: from Europe north to Polar Ural (Esyunin & Efimik, 1996), northeast to upper Kolyma (62.5°N, Marusik et al., 1992a) and southward to NE China (Song et al., 1999) and Central Aimak (Marusik & Logunov, 1998b). In Nearctic known from Alaska to northern New England (Millidge, 1984).
Comments. Inhabits forest openings and mesophytic meadows.

Diplocentria bidentata (Emerton, 1882): 07, 23; MFLT: Mf, Lf. (Eskov 1992).

***Diplocentria rectangulata* (Emerton, 1915)** Map 72
[Wiehle, 1960: f. 1017-1022; Palmgren, 1976: f. 10.22-24; Millidge, 1984: f. 137-138, 143, 152-153, 159, 162 Heimer & Nentwig, 1992: f. 582]
Distribution: Circum-Holarctic boreal range: highlands of Central Europe, Fennoscandia up to Lapland (Palmgren, 1976), throughout all of Siberia eastward to Kamchatka (Eskov, 1994) and southward to Central Aimak (Marusik & Logunov, 1998b). In Nearctic known from Yukon to SE Canada and northern New England (Millidge, 1984).
Diplocentria rectangulata (Emerton, 1915): 23, 27, 31, 35, 36, 40, 56; MFLT: Mf, Lf. (Eskov 1992).

***Diplocephalus cristatus angusticeps* Holm, 1973** Map 69
[Holm, 1973: f. 23-24, 27]
Distribution: "Yenisei" boreal range: from lower Yenisei River south to West Sayany (Eskov, 1988c, 1994).
Diplocephalus cristatus angusticeps Holm, 1973: 02, 04; GLT: Sm, S; ILT: Rpb.

? *Diplocephalus marusiki* Eskov, 1988 Map 76
[Eskov, 1988d: f. 12-17]
Distribution: Siberian (?) hypoarctic range: from Tuva to Chukotka (Eskov, 1994), with disjunction between Tuva and Kolyma.
Comments. Specimens from Chukotka (Marusik et al., 1992a) and Tuva (Logunov et al., 1998), all females, may belong to another species.
? *Diplocephalus marusiki* Eskov, 1988: 30, 63; ILT: U.

***Diplocephalus subrostratus* (O.P.-Cambridge, 1873)** Map 72
[Eskov, 1988d: f. 40-46]
Distribution: Siberio-Nearctic boreo-nemoral range: from Ural throughout Siberia northeast to Chukotka, and southward to Altai, Central Aimak and South Sakhalin (Eskov, 1994). In Nearctic known from Alaska to Newfoundland, south to Wyoming and New England (Buckle, personal communication).
Comments. Inhabits flood plain and deciduous forests.
Diplocephalus subrostratus (O.P.-Cambridge, 1873): 01, 07, 09, 12, 14, 17, 19, 20, 26, 30, 31, 40, 54, 58, 63; ILT: U; MFLT: Lf. (Eskov 1992).

***Dismodicus bifrons* (Blackwall, 1841)** Map 73
[Wiehle, 1960: f. 519-528; Palmgren, 1976: f. 5.17-20; Roberts, 1987: f. 13b, 16h; Heimer & Nentwig, 1992: f. 406]
Distribution: Circum-Holarctic boreo-nemoral range: from Europe to Chukotka Peninsula (Marusik et al., 1992a), north to Lapland (Palmgren, 1976) and Polar Ural (Esyunin & Efimik, 1996), southward to Altai, and Central Aimak (Eskov, 1994). In Nearctic known from Alaska to Greenland and Newfoundland, south to Montana and northern New England (Dondale et al., 1997).
Comments. According to Eskov (1994), in East Siberia and Nearctic this species is replaced by *D. alticeps* Chamberlin & Ivie, 1947.
Dismodicus bifrons (Blackwall, 1841): 01, 05, 07, 11, 14, 20, 23, 31, 48; ILT: U; MFLT: Mf, Lf. (Eskov 1992, Eskov & Marusik 1994).

***Drepanotylus borealis* Holm, 1945** Map 78
[Holm, 1945: 6a-e; Palmgren, 1975: f. 22.7-8]
Distribution: Trans-Palaearctic boreal range: from Lapland (Palmgren, 1975) to North Kuril Islands (personal data), north to Polar Ural and Putorana Plateau, and south to southern Urals (Esyunin & Efimik, 1996) and Tuva.
Drepanotylus borealis Holm, 1945: 03, 52; GLT: Sm. (Eskov 1992).

***Entelecara erythropus* (Westring, 1851)** Map 82
[Palmgren, 1976: f. 4.17-21; Roberts, 1987: f. 11d]
Distribution: Euro-Baikalian nemoral range: from western Europe to Cisbaikalia (Eskov, 1992), north to Lapland (Palmgren, 1976) and Putorana Plateau (Eskov, 1994) and south to East-Kazakhstan Area (Eskov & Marusik, 1995).
Entelecara erythropus (Westring, 1851): 09, 12, 30; ILT: U; MFLT: Mf, Sms. (Eskov 1992).

***Entelecara sombra* (Chamberlin & Ivie., 1947)** Map 73
[Chamberlin & Ivie, 1947: f. 50-54]
Distribution: Siberio-trans-Nearctic boreal range: from Yenisei to upper Kolyma, south to Tuva and south Sakhalin (Eskov, 1994). In Nearctic known to be distributed from Alaska to Newfoundland, south to British Columbia and northern New England (Dondale et al., 1997). Western limit of the range in Eurasia is unclear. It may occur in Ural and Fennoscandia (sub *E. media* Kulczyński, 1887).
Entelecara sombra (Chamberlin & Ivie, 1947): 09, 30, 31, 58, 63; ILT: U; MFLT: Sms.

***Epigytholus tuvensis* Tanasevitch, 1995**
[Tanasevitch, 1995: f. 81-16]
Distribution: Tuvan range: unknown outside of Tuva.
Epigytholus tuvensis Tanasevitch, 1995: 17, 51; ILT: As. (Tanasevitch 1995).

***Episolder finitimus* Tanasevitch, 1995** Map 59
[Tanasevitch, 1995: f. 1-7]
Distribution: West Mongolian range: from Tuva southeast to Central Mongolia (Marusik & Logunov, 1998b).
Episolder finitimus Tanasevitch, 1995: 26, 27, 31, 35, 36, 52; GLT: Mwt; MFLT: Lf, Mf. (Tanasevitch 1995).

***Erigone atra* Blackwall, 1883** Map 83
[Palmgren, 1976: f. 11.11,15, 12.1-3; Roberts, 1987: f. 43c, 46a; Heimer & Nentwig, 1992: f. 424]
Distribution: Circum-Holarctic polyzonal range: from Iceland (Agnarsson, 1996) and Portugal (Cardoso, 1999) to Chukotka (Eskov, 1994), north to Murmansk (Palmgren, 1976) and Chukotka, southward to Kashmir (personal data) and Yunnan (Li & Tao, 1995). In Nearctic known from Alaska to Greenland, south to Alabama and Virginia (Dondale et al., 1997).
Erigone atra Blackwall, 1833: 03, 08, 12, 14, 26, 27, 30, 31, 36, 40, 48, 56, 58, 60, 63; GLT: Mwt; ILT: Mm; MFLT: Sgg, Sms, S; MSLT: Dns. (Eskov 1992).

***Erigone dentigera* O.P.-Cambridge, 1874** Map 83
[Wiehle, 1960: f. 1065-1070; Palmgren, 1976: f. 11.13,17,22; Roberts, 1987: f. 44b, 47c; Heimer & Nentwig, 1992: f. 428]

Distribution: Circum-Holarctic boreo-nemoral range: from Iceland (Wiehle, 1960) to Sakhalin (Eskov, 1994), north to Lapland (Palmgren, 1976) and south to Balkans (Wiehle, 1960) and Azerbaijan (Mikhailov, 1997). In Nearctic known from Alaska to Newfoundland, south to Washington and New England (Eskov, 1994).
Comments. While it is a rather common species in Europe, there are only two records from Siberia.
Erigone dentigera O.P.-Cambridge, 1874: 28, 57; ILT: Ism; MSLT: Dbs.

***Erigone dentipalpis* (Wider, 1834)** Map 85
[Wiehle, 1960: f. 1048-1059; Palmgren, 1976: f. 12.16,18-18, 20; Roberts, 1987: f. 43a, 45b; Heimer & Nentwig, 1992: f. 423]
Distribution: Trans-Palaearctic polyzonal range: from Iberian Peninsula (Cardoso, 1999) to north Cisokhotia, north to Lapland (Palmgren, 1976) and middle Yenisei (Eskov, 1988c) and south to North Africa (Wiehle, 1960), northern India (personal data), Tibet and Gansu (Li & Tao, 1995). It was recently found in Newfoundland (Hutchinson & Bélanger, 1994) to where it was possibly introduced (Buckle, personal communication).
Erigone dentipalpis (Wider, 1834): 63; ILT: Ism.

***Erigone hypoarctica* Eskov, 1989** Map 80
[Eskov, 1989b: f. 34-37]
Distribution: Siberian hypoarctic range: from Polar Ural eastward to Chukotka and southward to Tuva and north Sakhalin (Eskov, 1989b, 1994).
Erigone hypoarctica Eskov, 1989: 05; MFLT: Mf. (Eskov 1992).

***Erigone piechocki* Heimer, 1987** Map 82
[Heimer, 1987: f. 9-11]
Distribution: Mongolo-Manchurian range: from East-Kazakhstan Area (Eskov, 1994) eastward to Maritime Province (personal data) and southward to Bayankhongor (Heimer, 1987).
Comments. Inhabits xeric and semixeric biotopes.
Erigone piechockii Heimer, 1987: 09, 31, 34, 44, 48, 49, 51, 54, 57, 63; ILT: Ism, Mm, As, U, Rpb.

***Erigone remota* L. Koch, 1869** Map 83
[Heimer & Nentwig, 1992: f. 427]
Distribution: Euro-Baikalian arcto-alpine range: known from the Alps, Novaya Zemlya, eastern Taimyr, Tuva and Central Tien-Shang (Eskov, 1994)
Erigone remota L. Koch, 1869: 47; GLT: Mst. (Eskov & Marusik 1994).

***Erigone simillima* Keyserling, 1886** Map 85
[Holm, 1970: f. 10]
Distribution: Siberio-Nearctic boreal range: from Sayany to Kamchatka, south to Central Aimak and north to upper Kolyma (Eskov, 1994). Distribution in Nearctic is not clear. It definitely occurs in Alaska and Yukon Territory. In it is conspecific (or confused) with *E. zographica* Crosby et Bishop, 1928 it reaches Nova Scotia, North Carolina and Utah (Dondale et al., 1997).
Erigone simillima Keyserling, 1886: 03, 07a; GLT: Sm; MFLT: Mf. (Eskov 1992, Eskov & Marusik 1994).

***Erigonoplus sibiricus* Eskov & Marusik, 1998** Map 59
[Eskov & Marusik, 1997: f. 1-7]
Distribution: North Mongolian range: from Tuva eastward to Cisbaikalia, south to Central Aimak (Eskov & Marusik, 1998).
Comments. Steppe dwelling species.
Erigonoplus sibiricus Eskov & Marusik, 1998: 12, 14; MSLT: S, Dns.

***Estrandia grandaeva* (Keyserling, 1886)** Map 86
[Palmgren, 1975: f. 20.12-15; Tao et al., 1995: f. 58-60]
Distribution: Circum-Holarctic hypoarcto-nemoral range: from north Fennoscandia throughout whole Siberia northeast to Chukotka Peninsula, and southward to Tuva, Central Aimak, Jilin and Honshu (Marusik et al., 1992a; Eskov, 1994; Li & Tao, 1995). In Nearctic known from Alaska to Newfoundland, south to northern British Columbia, Tennessee, and North Carolina (Dondale et al., 1997).
Comments. Inhabits bogs and forest clearings.
Estrandia grandaeva (Keyserling, 1886): 05, 07, 08, 35; MFLT: Mf. (Eskov 1992).

? *Flagelliphantes bergstroemi* (Schenkel, 1931) Map 80
[Holm, 1945: 19a-b; Palmgren, 1975: f.10.22-24; Saaristo & Tanasevitch, 1986: f. 16b]
Distribution: Euro-Baikalian boreal range: from north Fennoscandia to Putorana Plateau and southward to Mongolia, Tuva and Altai (Palmgren, 1975; Eskov, 1994; Marusik & Logunov, 1998b).
Comments. Comparison of Tuvan and Mongolian females identified as *F. bergstroemi* with these from Scandinavia (Saaristo, personal communication) has revealed some differences, so it is probable that Tuvan population belongs to another species, but until males are found, or the group is revised, correct identification is impossible.
Lepthyphantes bergstroemi Schenkel, 1931: 02, 07, 27, 31, 52, 56; GLT: Mst; MFLT: Mf. (Eskov 1992).

*****Floronia exornata* (L. Koch, 1878)**
[Tao et al., 1995: f. 61-68; Saaristo, 1996: f. 14, 16, 18]
Distribution: Mongolo-Manchurian nemoral range: from Tuva to Japan (Tsurusaki, personal communication), southward to Yunnan (Li & Tao, 1995).
Comments. Western limit of range of this species is unclear. Records of *F. bucculenta* (Clerck, 1757) from Western and South Siberia (Eskov, 1994) may refer to *F. exornata.*
Floronia bucculenta (Clerck, 1758): 58; ILT: Mm. (Eskov 1992).

***Gnathonarium dentatum* (Wider, 1834)**
[Wiehle, 1960: f. 677-682; Roberts, 1987: f. 12c]
Distribution: Trans-Palaearctic polyzonal (?) range: from Portugal (Cardoso, 1999) throughout whole Palaearctic (except northern and North-East Siberia), eastward to Kamchatka and Japan (Eskov, 1994) and southward to Fijian, southeast China (Li & Tao, 1995).
Gnathonarium dentatum (Wider, 1834): 07, 63; ILT: U; MFLT: Mf. (Eskov 1992).

***Gnathonarium taczanowskii* (O.P.-Cambridge, 1873)** Map 86
Distribution: Trans-Siberio-W(?) Nearctic hypoarcto-boreal range: from West Siberia southward to Mongolia and northeast to Chukotka. Range of this species in Nearctic is unclear. It was found in great numbers in Alaska and Yukon Territory (personal data) and is probably a senior synonym of West Nearctic *G. famelicum* (Keyserling, 1886).
Comments. Eskov (1994) treated the later species a junior synonym of *G. suppositum* (Kulczysnki, 1885). *G. famelicum* known to be distributed from Alaska to Manitoba and south to British Columbia, Alberta and Saskatchewan (Dondale et al., 1997). There are no drawings of this species in literature, and our knowledge on it is based on material from the collection of Eskov, who studied types, and on examination of "topotypes".
Gnathonarium taczanowskii (O.P.-Cambridge, 1873): 05, 11, 19, 20, 30, 31; ILT: U, Rpb; MFLT: Mf. (Eskov 1992).

***Gonatium rubellum* (Blackwall, 1841)** Map 84
[Wiehle, 1960: f. 618-622; Palmgren, 1976: f. 10.10-11; Roberts, 1987: f. 18b, 19b; Heimer & Nentwig, 1992: f. 442]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Maritime Province (Eskov, 1994), north to Lapland (Palmgren, 1976) and north part of Tyumen Area (Eskov, 1994) and south to Yugoslavia (Nikolić, 1981), Tuva and Maritime Province (Eskov, 1994).
Gonatium rubellum (Blackwall, 1841): 01, 05, 40; MFLT: Mf. (Eskov 1992).

***Gonatium rubens* (Blackwall, 1841)** Map 88
[Wiehle, 1960: f. 661-617; Palmgren, 1976: f. 10.6-9; Millidge, 1981c: 1-6, 10, 13, 17, 22; Roberts, 1987: f. 18a, 19a; Heimer & Nentwig, 1992: f. 441]
Distribution: Trans-Palaearctic polyzonal range: Europe, Caucasus, north Tien-Shang, all of Siberia from Polar Ural (Eskov, 1994) eastward to the Bering Strait (Marusik et al., 1992a), and southward to Altai (Marusik et al., 1996), Tuva (Logunov et al., 1998), Khubsugul (Marusik & Logunov, 1998b) and Maritime Province (Eskov, 1994).
Comments. Meadow and shrub litter dweller.
Gonatium rubens (Blackwall, 1833): 22, 26, 27, 35, 36, 40, 42, 52, 54, 56; MFLT: Mf, Lf. (Eskov & Marusik 1994).

***Hilaira frigida intercepta* (O.P.-Cambridge, 1873)** Map 78
Distribution: Siberio-Alaskan (?) boreal range: from Yenisei to Yukon Territory, north to Chukotka and south to Tuva and Cisbaikalia (Eskov, 1994; Dondale et al., 1997).
Comments. This species, as well as the entire *H. tatrica* Kulczyński, 1915 group requires revision. Eskov (1981) synonymised Alaskan *H. montigena arctica* Holm, 1960 (Holm, 1960: figs. 28-31) with *H. intercepta*, and changed the status of the later form to subspecies. To our mind and according to Saaristo (personal communication) populations from south Siberia, Chukotka and NW America, or at least south Siberian and Beringian populations may belong to a different species.
Hilaira frigida intercepta (O.P.-Cambridge, 1873): 07; MFLT: Mf. (Eskov 1992).

***Hilaira gibbosa* Tanasevitch, 1982** Map 330b
[Tanasevitch, 1982: f. 1.5-7, 3.5-7, 4.1-4; Wunderlich, 1995: f. 73-76]
Distribution: Siberio-NW Nearctic range: from Polar Ural throughout Siberia to Yukon Territory, north to Putorana Plateau (Eskov, 1994; Dondale et al., 1997), and southward to Tuva and Central Aimak (Wunderlich, 1995).
Hilaira gibbosa Tanasevitch, 1982: 26, 27; MFLT: Sms. (Eskov 1992).

? ***Hilaira glacialis*** **(Thorell, 1872)**
[Holm, 1956: f. 5a-f]
Comments. This species belongs to *H. tatrica* species group, which requires revision. Probably the Tuvan population is not conspecific with high Arctic species such as *H. glacialis* living in tundra zone north to Spitsbergen.
? *Hilaira glacialis* (Thorell, 1872): 47; GLT: Mst. (Eskov & Marusik 1994).

Hilaira herniosa **(Thorell, 1875)** Map 87
[Palmgren, 1975: f. 22.21-21; Eskov, 1987a: f. 6.6-8; Heimer & Nentwig, 1992: f. 483]
Distribution: Circum-Holarctic hypoarcto-boreo-alpine range: from Fennoscandia and highlands of Central Europe south to Altai, Tuva, Central Mongolia and Hokkaido, northeast to Amguema River (Eskov, 1994; Marusik et al. ,1992a). In Nearctic known from Alaska to Greenland and Newfoundland, south to British Columbia and northern New England (Dondale et al., 1997).
Comments. Inhabits taiga, bogs and mountain tundra.
Hilaira herniosa (Thorell, 1875): 02, 07, 23, 20, 26, 27, 31, 35, 36, 40, 54, 56; GLT: Mwt; MFLT: Mf, Lf. (Eskov 1992).

Hilaira minuta **Eskov, 1979** Map 76
[Eskov, 1979: f. 6-10, 17-18]
Distribution: Siberian boreal range: from Yenisei northeast to Anadyr River mouth and southward to Tuva, Central Aimak of Mongolia and Cisamuria (Eskov, 1994; Marusik et al., 1992a).
Hilaira minuta Eskov, 1979: 23, 26, 27, 31, 35, 40; MFLT: Mf, Lf. (Eskov 1992).

Hilaira mongolica **Wunderlich, 1995** Map 77
[Wunderlich, 1995: f. 77-83]
Distribution: Siberian boreo-montane range: from Tuva, southward to Central Mongolia and northeast to upper Kolyma (Marusik et al., 1992a).
Comments. This species belongs to *H. tatrica* group, which requires revision. According to Saaristo & Eskov (personal communication) all records of *H. tatrica* outside highlands of Central Europe correspond to series of sibling vicariated species. Therefore range limits of *H. mongolica* are unclear. Record of *H. tatrica* from Jilin (cf. Song et al., 1999) probably refers to this species.
"Hilaira" mongolica Wunderlich, 1995: 07, 08a, 11, 23, 20, 26, 31, 35, 63; ILT: U; MFLT: Mf, Lf. (Eskov 1992: sub. *H. tatrica tatrica*).

Hilaira sibirica **Eskov, 1987** Map 77
[Eskov, 1987a: f. 6.1-6]
Distribution: Siberio-Alaskan boreo-hypoarctic range: from Putorana Plateau southward to north Tuva, and northeast to Chukotka (Marusik et al., 1992a; Eskov, 1994). In Nearctic recorded only from Yukon Territory only (Dondale et al., 1997).
Hilaira sibirica Eskov, 1987: 07a; ILT: U; MFLT: Sm. (Eskov & Marusik 1994).

Hilaira **sp. 1**
Comments. We have only few females of this species, which may be conspecific with a new species reported from Central Mongolia (sub *H.* cf. *jamalensis* Eskov, 1981, Marusik & Logunov, 1998b).

Hilaira sp. 1 (*cf. marusiki*): 63; ILT: U.

Holminaria prolata **(O.P.-Cambridge, 1873)** Map 79
[Eskov, 1991c: f. 12-17]
Distribution: Siberian boreal range: from Evenkia south to Tuva and eastward to upper Kolyma and Sakhalin (Eskov, 1994).
Holminaria prolata (O.P.-Cambridge, 1873): 07, 31; MFLT: Mf. (Eskov 1992: sub. *H. obscura*).

Horcotes strandi **(Sytshevskaya, 1935)** Map 89
[Millidge, 1977: f. 117; Palmgren, 1976: f. 14.11-14]
Distribution: Trans-Palaearctic-NW Nearctic boreo-hypoarctic range: from north Scandinavia via Ural southward to south Ural, Tuva and north Sakhalin, and eastward to Chukotka (Eskov, 1994). In Nearctic known from a single locality in southern Yukon Territory (Dondale et al., 1997).
Comments. Inhabits shrub leaf litter in taiga zone and in mountain tundra.
Horcotes strandi (Sytshevskaja, 1935): 02, 40, 54, 56; GLT: ?. (Eskov 1992: sub. *Saloca s.*).

Hylyphantes nigritus **(Simon, 1881)** Map 84
[Wiehle, 1960: f. 737-741; Palmgren, 1976: f. 7.5-6; NH: f. 462]
Distribution: Trans-Palaearctic nemoral range: from France (Wiehle, 1960) to middle Kuriles (personal data), north to SW Finland (Palmgren, 1976), and south to Italy, Balkans (Wiehle, 1960), Tuva, Buryatia (personal data) and Jilin (Song et al., 1999).
Hylyphantes nigritus (Simon, 1881): 02, 04; GLT: Mwt, Sm, S.

Hypomma bituberculatum **(Wider, 1834)** Map 87
[Wiehle, 1960: f. 530-537; Palmgren, 1976: f. 6.1-5; Roberts, 1987: f. 13d, 16j; Heimer & Nentwig, 1992: f. 464]
Distribution: Trans-Palaearctic boreo-nemoral range: widespread in Europe, Siberia (northeast to Chukotka) and Manchuria (Maritime Province and Jilin) (Eskov, 1994).
Comments. Records from the Far East require re-examination because of presence of sibling species *H. affine* Schenkel, 1930.
Hypomma bituberculatum (Wider, 1834): 17, 40, 56, 57, 58, 63; ILT: U, Bf. (Eskov 1992).

Hypomma cornutum **(Blackwall, 1833)** Map 82
[Wiehle, 1960: f. 545-552; Palmgren, 1976: f. 6.8-11; Roberts, 1987: f. 13b, 17b; Heimer & Nentwig, 1992: f. 465]
Distribution: Euro-Mongolian (?) nemoral range: from western Europe to Tuva, north to south-western Finland and south to Yugoslavia and Caucasus (Nikolić, 1981; Mikhailov, 1997).
Comments. This species was reported by Eskov (1988c) from Putorana Plateau, but this record was neither mentioned nor corrected in his catalogue (Eskov, 1994). Probably Eskov's record refers to *H. bituberculatum*.
Hypomma cornutum (Blackwall, 1833): 07, 20; ILT: U; MFLT: Mf. (Eskov 1992).

Hypselistes jacksoni **(O.P.-Cambridge, 1902)** Map 89
[Roberts, 1987: f. 21c, 22a; Marusik & Leech, 1993: f. 6-11, 21-22]
Distribution: Trans-Palaearctic-W Nearctic boreo-nemoral range: in Siberia recorded from Karskaya Tundra, Putorana Plateau, Evenkia, upper Kolyma, Chukotka (Eskov

1985, 1994) and from northern parts of Tyumen' Area (Tazovski), Taimyr Peninsula (Zhdanikha), Khamar-Daban Mt. range, in Magadan and Chaun River mouth (Eskov 1988c). The southernmost records in Russia are from North Caucasus (Tanasevitch 1990), Altai and the Maritime Province, the northernmost points are Zhdanikha (~72°N) and the Wrangel Island (71°N) (Marusik & Leech 1993). This species known from Jilin, NE China (Song et al., 1999). In Nearctic recorded from only Utah (Marusik & Leech, 1993).
Comments. Inhabits various biotopes with mesophytic vegetation within forest belt.
Hypselistes jacksoni (O.P.-Cambridge, 1902): 01, 07, 23, 27, 30; MFLT: Mf, Lf. (Eskov 1992; Marusik & Leech 1993: map 2).

***Hypselistes semiflavus* (L. Koch, 1879)** Map 79
[Holm, 1973: f. 46-48; Marusik & Leech, 1993: f. 15-18, 25-26]
Distribution: Siberio-Alaskan boreal range: from South Yamal southward to Tuva eastward to Kamchatka, northward to Lena River mouth (Marusik & Leech, 1973). In Nearctic known from Yukon Territory (Marusik & Leech, 1993).
Hypselistes semiflavus (L. Koch, 1879): 05, 23; MFLT: Lf, Sgg. (Eskov 1992, Marusik & Leech, 1993: map 1).

***Improphantes complicatus* (Emerton, 1882)** Map 93
[Thaler, 1983: f. 45-46, 51-53; Roberts, 1987: f. 80e; Heimer & Nentwig, 1992: f. 536]
Distribution: Circum-Holarctic boreo-montane range: Alps, north Europe, Iceland, whole Siberia northeast to Chukotka, southward to Mongolia and Tuva (Eskov, 1994; Marusik & Logunov, 1998b). In Nearctic occurs from Alaska to Greenland and south to New England and Wyoming (Roth, 1988; Eskov, 1994).
Improphantes complicatus (Emerton, 1882): 26, 27, 31, 36, 40; MFLT: Mf, Lf.

***Incestophantes ancus* Tanasevitch, 1996**
[Tanasevitch, 1996: f. 21-22]
Distribution: Tuvan range: known from Central Tuva only.
New locality: 26.
Incestophantes ancus Tanasevitch, 1996: 11; MFLT: Lf. (Tanasevitch 1996).

***Incestophantes bonus* Tanasevitch, 1996** Map 81
[Tanasevitch, 1996: f. 1-4]
Distribution: Western Mongolian range: from western Tuva to Bayankhongor (Marusik & Logunov, 1998b).
Incestophantes bonus Tanasevitch, 1996: 50; ILT: U, Rpb. (Tanasevitch, 1996).

****Incestophantes cf. bonus* Tanasevitch, 1996**
Comments. Male and several females collected in Ust-Uyuk belong to a new, undescribed species.
Locality: 09.

***Incestophantes incestus* (L. Koch, 1879)** Map 81
[Holm, 1973: f. 65-67; Tanasevitch & Eskov, 1987: f. 4.1-5; Tanasevitch, 1992: f. 4a]
Distribution: Siberian hypoarcto-boreal range: Siberia (except North-East) southward to Tuva and Mongolia (Eskov, 1994).

Comments. Very often associated with stony slopes.
Incestophantes incestus (L. KOCH, 1879): 35, 36, 52; MFLT: ?

***Incestophantes logunovi* Tanasevitch, 1996**
[Tanasevitch, 1996: f. 5-8]
Distribution: Tuvan range: known only from a single locality in southeastern Tuva.
Incestophantes logunovi Tanasevitch, 1996: 53; MSLT: Dbs. (Tanasevitch 1996).

***Incestophantes obtusus* Tanasevitch, 1996**
[Tanasevitch, 1996: f. 17, 19; Tao et al., 1995: f. 121-126]
Distribution: Mongolo-Manchurian range: from Tuva east to Khabarovsk Province (Tanasevitch, 1996) and south to Jilin (sub *Lepthyphantes kochiellus* (Strand, 1900), Li & Tao, 1995).
Comments. While *L. kochiellus* originally was reported from Jilin, Song et al. (1999) listed this species only from Sichuan and Qinghai.
Incestophantes obtusus Tanasevitch, 1996: 07, 20; ILT: U; MFLT: Mf. (Eskov 1992: sub. *Lepthyphantes kochiellus*).

***Incestophantes tuvensis* Tanasevitch, 1996** Map 91
[Tanasevitch, 1996: f. 12-16]
Distribution: Western Mongolian range: from West Tuva (Logunov et al., 1998) southeast to Central Mongolia.
Incestophantes tuvensis Tanasevitch, 1996: 11, 30, 40, 44, 48, 50, 52, 58, 63; ILT: U, Mm; MFLT: Lf. (Tanasevitch 1996).

***Improphantes flexilis* Tanasevitch, 1986** Map 91
[Tanasevitch, 1986: f. 82-84, 85-88]
Distribution: Siberian boreal range: from Yenisei northeast to upper Kolyma and Kamchatka (Eskov, 1994) and southward to northern Mongolia (Marusik & Logunov, 1998b).
Improphantes flexilis (Tanasevitch, 1986): 02; GLT: Sm, Mwt. (Eskov 1992: sub. *Lepthyphantes f.*).

***Ivielum sibiricum* Eskov, 1988** Map 81
[Eskov, 1988a: f. 4.1-5; Wunderlich, 1995: f. 90-94]
Distribution: Siberio-NW Nearctic boreal range: from Tuva in the west, northeast to upper Kolyma and Kamchatka (Eskov, 1994), and southward to Central Mongolia. In Nearctic known from Yukon Territory (Dondale et al., 1997).
Habitat. Common. Wide range of biotopes with herbaceous vegetation, moss and dead leaf litter in forest belt (up to 700 m).
Ivielum sibiricum Eskov, 1988: 02, 04, 05, 09, 27, 35, 40, 52, 54, 56, 63; GLT: Mwt; ILT: U; MFLT: Mf, Sms. (Eskov 1992).

***Kaestneria pullata* (O.P.-Cambridge, 1863)** Map 93
[Ivie, 1969: f. 116-121; Palmgren, 1975: f. 17.1-3; Heimer & Nentwig, 1992: f. 469]
Distribution: Circum-Holarctic boreo-nemoral range: from north Finland to Central Europe, eastward to upper Kolyma (Eskov, 1994; Marusik et al., 1992a). In Nearctic recorded from Alaska to Newfoundland (Dondale et al., 1997).
Kaestneria pullata (O.P.-Cambridge, 1863): 63; ILT: U.

***Lasiargus hirsutus* (Menge, 1869)** Map 88
[Wiehle, 1960: f. 592-600; Palmgren, 1976: f. 8.16-19; Heimer & Nentwig, 1992: f. 472]
Distribution: Trans-Palaearctic boreo-nemoral range: from France (Wiehle, 1960) to Kamchatka (Eskov, 1994), north to southern Finland (Palmgren, 1976) and Putorana Plateau (Eskov, 1988c), and south to Caucasus and Kyrgyzstan (Eskov, 1994).
Lasiargus hirsutus (Menge, 1869): 14, 21, 26, 27, 30, 35, 40, 52, 54, 56, 60; GLT: ?; MFLT: Mf, Sms, S; MSLT: Cxs. (Eskov, 1992).

***Lasiargus pilipes* (Kulczyński, 1908)** Map 92
[Eskov, 1989b: f. 24-28]
Distribution: Siberian boreal range: from Yenisei south to Tuva and south Transbaikalia, and east to Sakhalin and upper Kolyma (Eskov, 1994).
Lasiargus pilipes (Kulczynski, 1908): 14, 56; MFLT: Lf (?).

"*Lepthyphantes" cornutus* Schenkel, 1927 Map 85
[Thaler, 1972: f. 19-37; Palmgren, 1975: f. 12.5-7; Heimer & Nentwig, 1992: f. 477; Kronestedt, 1993: f. 2; Esyunin & Efimik, 1998b: f. 1-9]
Distribution: Euro-Baikalian boreo-montane range: highlands of Central Europe, Fennoscandia (Kronestedt, 1993), Ural (Esyunin & Efimik, 1998b), East-Kazakhstan Area, Altai, Tuva, Khakassia (Eskov, 1994) and Mongolia (Marusik & Logunov, 1998b).
Comments. This species, as well as all other Siberian forms are not congeneric with the type species of the genus, *L. minutus* (Blackwall, 1833) (Saaristo & Tanasevitch, personal communication). Because of this generic name is placed in quotation marks.
Lepthyphantes cornutus Schenkel, 1927: 02, 26, 30; GLT: Sm, Mwt; MFLT: Lf. (Eskov 1992).

***"Lepthyphantes" distichus* Tanasevitch, 1986** Map 89
[Tanasevitch, 1986: f. 89-94]
Distribution: "Yenisei" boreal range: known from south part of Krasnoyarsk Province including West Sayany.
"Lepthyphantes" distichus Tanasevitch, 1986: 02; GLT: Sm, Mwt. (Eskov 1992).

***"Lepthyphantes" kaszabi* Wunderlich, 1995** Map 87
[Wunderlich, 1995: f. 28-32]
Distribution: West Mongolian range: from eastern Tuva eastward to Bulgan Aimak (Wunderlich, 1995).
**Lepthyphantes kaszabi* Wunderlich, 1995: 49, 63; ILT: Ism.

***"Lepthyphantes" laricetorum* Tanasevitch et Eskov, 1987** Map 92
[Tanasevitch & Eskov, 1987, 1987: 2.1-5]
Distribution: Trans-Siberian boreo-hypoarctic range: from Polar Ural to Chukotka Peninsula, north to Lena River mouth, and south to Tuva and south Transbaikalia (Tanasevitch & Eskov, 1987; Eskov, 1994).
Comments. Taiga dweller.
Lepthyphantes laricetorum Tanasevitch & Eskov, 1987: 23, 35; MFLT: Lf. (Eskov 1992).

***"Lepthyphantes" luteipes* (L. Koch, 1879)** Map 215
[Holm, 1973: f. 71-72; Tanasevitch, 1986: f. 100-103; Wunderlich, 1995: f. 33-36]
Distribution: Trans-Siberian boreo-nemoral range: from South Ural southward to Altai, Mongolia and Japan, northward to upper Kolyma and eastward to Kamchatka (Eskov, 1994).
Comments. Inhabits deciduous forests and groves.
Lepthyphantes luteipes (L. Koch, 1879): 02, 07, 11, 19, 20, 23, 26, 27, 31, 36, 40, 45, 52, 56; ILT: U; GLT: Mwt; MFLT: Mf, Sgg. (Eskov 1992).

"*Lepthyphantes*" *sajanensis* Eskov & Marusik, 1994 Map 94
[Eskov & Marusik, 1994: f. 24-26]
Distribution: West Mongolian montane range: from West Sayany to Khamar-Daban Mt. Range, south Cisbaikalia (Eskov & Marusik, 1994).
Comments. Inhabits screes.
"*Lepthyphantes*" *sajanensis* Eskov & Marusik, 1994: 02, 04, 05; GLT: Sm, Mwt; ILT: Rpb. (Eskov & Marusik 1994).

***"Lepthyphantes" terrenus* (L. Koch, 1879)** Map 93
[Holm, 1973: f. 76-77]
Distribution: "Yenisei" (?) boreal range: known from environs of Krasnoyarsk and NE Tuva only (Eskov, 1994).
Comments. In our check-list published in 1998 we missed Eskov's (1994) correction of his former (Eskov, 1992) identification of this species from Tuva as *L. quadrimaculatus*. According to Saaristo (personal communication) two names, *quadrimacuatus* and *terrenus* are synonyms, so the distribution of *AL.@ terrenus* is Euro-Baikalian.
"Lepthyphantes" quadrimaculatus Kulczynski, 1896: 07; MFLT: Mf. (Eskov 1992).

***"Lepthyphantes" taczanowskii* (O.P.-Cambridge, 1973) Map 94**
[Kulczyński, 1926: f. 20-21; Holm, 1973: f. 78-84]
Distribution: Trans-Siberian hypoarcto-boreal range: from Polar Ural northeast to Chukotka (177°E, Marusik et al., 1992a) and southward to Tuva, Central Aimak and North Sakhalin (Eskov, 1994).
Comments. Inhabits mixed and deciduous forests with mesophytic vegetation.
Lepthyphantes taczanowskii (O.P.-Cambridge, 1873): 19, 20, 31; ILT: U. (Eskov 1992).

***"Lepthyphantes" sp.* 1**
Comments. Several females found around Tere-Khol Lake could be conspecific with *"L." pepticus* Tanasevitch, 1988, the female of which is undescribed.
Lepthyphantes sp. 1 (*cf. pepticus*): 63; ILT: Bf.

***Leptorhoptrum robustum* (Westring, 1851)** Map 90
[Palmgren, 1975: f. 22.9-10; Roberts, 1987: 50a; Heimer & Nentwig, 1992: f. 474]
Distribution: Trans-Palaearctic-W Nearctic boreo-nemoral range: from Iceland to Kamchatka, north to Lapland and Putorana Plateau, south to West Sayany and Honshu (Palmgren, 1975; Eskov, 1994). In Nearctic known from Utah only (Eskov, 1994).
Comments. Judging from the distribution pattern shown on map, it is possible to suggest that Eurasian and American populations are not conspecific as was stated by Eskov & Marusik (1994).
Leptorhoptrum robustum (Westring, 1851): 01, 02; GLT: Sm. (Eskov 1992).

***Lophomma cognatum* Holm, 1962** Map 102
[Holm, 1962: f. 19]
Distribution: Siberio-Alaskan hypoarcto-nemoral range (Marusik et al., 1996): from

Altai via Tuva, West Sayany, Buryatia, and the Sokhondo Reserve (Eskov, 1992), southward to Central Mongolia and South Kuriles, north to Putorana Plateau (Eskov, 1989a) and Central Yakutia (upper Yana), and northeast to eastern parts of the Chukotka Peninsula (171° W) (Marusik et al., 1992a).
Lophomma cognatum Holm, 1960: 08a; MFLT: Mf. (Eskov 1992).

***Macrargus multesimus* (O.P.-Cambridge, 1875)** Map 90
[Palmgren, 1975: f. 4.3-4]
Distribution: Circum-Holarctic hypoarcto-nemoral range: from north Fennoscandia (Palmgren, 1975) via Polar Ural southward to South Ural, Altai, Central Mongolia, Jilin (Eskov, 1994) and northeast to Chukotka Peninsula (Marusik et al., 1992a). In Nearctic known from Alaska to Nova Scotia, south to Alberta and Connecticut (Dondale et al., 1997).
Comments. Taiga dweller.
Macrargus multesimus (O.P.-Cambridge, 1875): 07, 11, 19, 27, 31, 40; MFLT: Mf, Lf. (Eskov 1992).

***Maro flavescens* (O. P.-Cambridge, 1873)** Map 95
[Saaristo, 1971: f. 32-39; Wunderlich, 1995: f. 42-46]
Distribution: Siberio-Manchurian hypoarcto-nemoral range: from Yenisei-Tuva in the west, southward to Central Mongolia , southeast to Maritime Province and eastward to north Cisamuria and North Sakhalin (Eskov, 1994).
Maro flavescens (O. P.-Cambridge, 1873): 07a; MFLT: ?. (Eskov & Marusik 1994).

***Maro saaristoi* Eskov, 1980** Map 94
[Eskov, 1980a: f. 5-8]
Distribution: Siberian boreal range: from Yenisei to north Cisokhotia, south to Tuva and north Sakhalin (Eskov, 1994).
Maro saaristoi Eskov, 1980: 11, 14, MFLT: Lf. (Eskov 1992).

***Maro sibiricus* Eskov, 1980** Map 95
[Eskov, 1980a: f. 1-4]
Distribution: Siberio-Nearctic boreal range: from Tuva (Logunov et al., 1998) and middle Yenisei eastward to North Kuriles (personal data) and northward to upper Kolyma (Eskov, 1991a). In Nearctic reported only from Quebec (Koponen, 1994) only.
Maro sibiricus Eskov, 1980: 07; MFLT: Mf. (Eskov 1992).

***Maso sundevalli* (Westring, 1851)** Map 96
[Roberts, 1987: f. 20a; Heimer & Nentwig, 1992: f. 559]
Distribution: Circum-Holarctic boreo-nemoral range: in Europe northward to north Finland, Iceland and Polar Ural, in Siberia almost all records are south of 65°N, in Chukotka Peninsula slightly beyond Arctic Circle, in Asia southward to Caucasus, Tien-Shang, Mongolia, Jilin (Eskov, 1994) and Japan (Tsurusaki, personal communication). In Nearctic known from Yukon Territory to Newfoundland, south to northern British Columbia, Tennessee and North Carolina (Dondale et al., 1997).
Comments. Inhabits forests with mesophytic vegetation and bogs.
Maso sundevalli (Westring, 1851): 07, 27, 56, 63; ILT: U; MFLT: Mf. (Eskov 1992).

***Mecynargus monticola* (Holm, 1943)** Map 96
[Holm, 1943: f. 7-9; Palmgren, 1976: f. 24.16-17]
Distribution: Trans-Palaearctic-NW Nearctic hypoarcto-boreal range: from north Fennoscandia to Polar Ural, through Evenkia (Eskov 1988b), central and northern Yakutia, northeast to Amguema River and Kresta Bay (Marusik et al. 1992a) and southward to Tuva (Logunov et al., 1998), Central Mongolia, Sakhalin and Cisamuria (the Sokhondo Reserve) (Eskov, 1990b, 1992, 1994). In Nearctic known from Yukon, Northwest Territories and northern British Columbia (Dondale et al., 1997).
Mecynargus monticola (Holm, 1943): 02, 04, 23, 26, 27, 35, 40, 56; GLT: Mwt, Sm; MFLT: Lf. (Eskov 1992).

***Mecynargus sphagnicola* (Holm, 1939)** Map 96
[Holm, 1943: f. 2.a-e; I.4-6; Palmgren, 1976: f. 24.13-15]
Distribution: Circum-Holarctic hypoarcto-boreal range: from north Fennoscandia to Polar Ural, Taimyr, through Evenkia (Eskov 1988b) to Tuva and Central Mongolia, and northeast to Chukotka Peninsula (Eskov, 1994). In Nearctic known from Yukon, northwestern Northwest Territories and Greenland (Dondale et al., 1997).
Comments. We missed a record of this species from locality #03 reported by Eskov & Marusik (1994). It is a moss dwelling species.
? *Mecynargus sphagnicola* (Holm, 1939): 40; ?.

***Mecynargus tungusicus* (Eskov, 1981)** Map 102
[Eskov, 1981a: f. 2.7-8, 3.1-4]
Distribution: Siberio-NW Nearctic boreo-hypoarctic range: from Komi Republic northward to Taimyr Peninsula and Lena River mouth, southward to Tuva and NW China (Eskov, 1988b, 1994). Isolated population known from North Tien-Shang (Eskov, 1994). In Nearctic recorded from Yukon Territory (Dondale et al., 1997).
Comments. Inhabits moist litter in coniferous forests.
Mecynargus tungusicus (Eskov, 1981): 26, 27, 40, 56; MFLT: Mf, Lf. (Eskov 1992).

***Metopobactrus prominulus* (O. P.-Cambridge, 1872)** Map 98
[Roberts, 1987: f. 14c, 17c; Heimer & Nentwig, 1992: f. 575]
Distribution: Subcircum-Holarctic boreo-nemoral range: from Europe via north Ural eastward to Kurile Islands (personal data), north to Lapland (Palmgren, 1976) and Vilyuy River (Marusik et al., 1993), and southward to Caucasus, north Tien-Shang, Mongolia, and Japan (Eskov, 1994). In Nearctic known from Saskatchewan to Greenland and New England (Buckle, personal communication).
Comments. Most of specimens have been found in steppes and dry meadows.
Metopobactrus prominulus (O.P.-Cambridge, 1872): 31, 56, 63; ILT: U; MFLT: Sss (?).

***Micrargus herbigradus* (Blackwall, 1854)** Map 101
[Millidge, 1975: f. 1-2, 6, 9; Palmgren, 1976: f. 14.4-6, 33b.3-4,7; Roberts, 1987: f. 34d, 38g; Heimer & Nentwig, 1992: f. 578]
Distribution: Trans-Palaearctic (?) boreo-nemoral range: from western Europe to Kamchatka, north to Lapland (Palmgren, 1976) and Polar Ural (Esyunin & Efimik, 1996), south to Azerbaijan and Honshu and Jilin (Eskov, 1994).
Comments. It is possible that Far East is inhabited by another species, recently described from northern Japan, *M. hokkaidensis* Wunderlich, 1995, so, *M. herbigradus* may have Euro-Baikalian distribution.

Micrargus herbigradus (Blackwall, 1854): 31; MFLT: ?.

***Microlinyphia impigra* (O.P.-Cambridge, 1871)** Map 101
[Palmgren, 1975: f. 20.9-11; Roberts, 1987: f. 86c; Roberts, 1885: p.370; Heimer & Nentwig, 1992: f. 585]
Distribution: Circum-Holarctic boreo-nemoral range: from western Europe to Sakhalin (Marusik et al., 1992b), north to south Finland and SW Yakutia, south to Azerbaijan (Mikhailov, 1997) and Xinjiang (Song et al., 1999). In Nearctic known from Alaska to Ontario, south to Washington and northern New York (Dondale et al., 1997).
Microlinyphia impigra (O.P.-Cambridge, 1871): 23, 63; ILT: Ism. (Eskov 1992).

***Microlinyphia pusilla* (Sundevall, 1829)** Map 98
[Helsdingen, 1970: f. 1-8; Roberts, 1987: f. 86b; Heimer & Nentwig, 1992: f. 584]
Distribution: Circum-Holarctic polyzonal range: from Europe and North Africa to Caucasus and Central Asia, Xinjiang, Gansu and Honshu (Eskov, 1994; Li and Tao, 1995), northward to Chukotka Peninsula (178°E) (Marusik et al. 1992a). In Nearctic known from Alaska to Quebec (Koponen, 1994) south to Colorado (Helsdingen, 1970).
Comments. Inhabits various biotopes: from forest clearings to steppe.
Microlinyphia pusilla (Sundevall, 1830): 07, 11, 17, 23, 27, 28, 30, 31, 32, 34, 35, 36, 44, 49, 51, 53, 56, 57, 63; ILT: Ism, As, Rpb, Bf, U; MFLT: Sss, Sms; MSLT: Dbs. (Eskov 1992).

***Microneta viaria* (Blackwall, 1841)** Map 215
[Roberts, 1987: f. 62.e; Tao et al., 1995: f. 189-198]
Distribution: Circum-Holarctic polyzonal range: within Asia known from North to South Ural, southward to Tien-Shang, Xinjiang-Jilin, Korea, Japan (Eskov, 1994; Li & Tao, 1995), northeast to upper Kolyma (Marusik et al., 1992a). In Nearctic known from Alaska to Nova Scotia, south to New Mexico and Connecticut (Dondale et al., 1997).
Comments. Most specimens have been found in stony debris in forest belt along north exposed slopes and in mountain tundra .
Microneta viaria (Blackwall, 1841): 02, 04, 07, 14, 19, 30, 35, 63; GLT: Mst, S, Sm; ILT: U; MFLT: Mf, S. (Eskov 1992).

***Minicia marginella* (Wider, 1834)** Map 98
[Wiehle, 1960: f. 27-35; Palmgren, 1976: f. 3.7-12; Millidge, 1977: f. 65; Marusik & Saaristo, 1999: f. 15]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe, including south Finland eastward to upper Kolyma.
Comments. Meadow dweller.
Minicia marginella (Wider, 1834): 35; MFLT: Sgg.

***Minyrioloides trifrons* (O.P.-Cambridge, 1863)** Map 104
[Holm, 1945: f. 8a-i; Wiehle, 1960: f. 692-700; Palmgren, 1976: f. 6.16-19; Roberts, 1987: f. 15d; Heimer & Nentwig, 1992: f. 336]
Distribution: Circum-Holarctic boreo-nemoral range: from western Europe to Kamchatka, north to Lapland (Palmgren, 1996), Polar Ural (Esyunin & Efimik, 1996), NE Yakutia, and south to Azerbaijan, Kyrgyzstan and South Sakhalin (Eskov, 1994; Mikhailov, 1997). In Nearctic known from Alaska to Nova Scotia and northern New England (Dondale et al., 1997).

Minyrioloides trifrons (O.P.-Cambridge, 1863): 04, 05, 11, 23, 36; GLT: Sm; MFLT: Mf, Lf. (Eskov 1992).

***Monocerellus montanus* Tanasevitch, 1983** Map 99
[Eskov & Marusik, 1994: f. 38-40]
Distribution: Trans-Siberian boreo-hypoarctic range: from Polar Ural (Eskov, 1994) southward to Tuva, and northeast to Chukotka Peninsula (Marusik et al., 1992a; Eskov & Marusik, 1994).
Comments. Inhabits screes.
Monocerellus montanus Tanasevitch, 1983: 02, 54; GLT: Mst.

***Nenilinium asiaticum* Eskov, 1988** Map 99
[Eskov, 1988a: 6.1-5]
Distribution: Siberian boreo-nemoral range: from Tuva to upper Kolyma and southward to Maritime Province (Eskov, 1994).
Comments. It may also occur in Mongolia (sub *Gongylidiellum luteolum* Loksa, 1965, Loksa, 1965).
New locality: 09.
Nenilinium asiaticum Eskov, 1988: 05; MFLT: Mf. (Eskov 1992).

***Neriene clathrata* (Sundevall, 1830)** Map 104
[Roberts, 1987: f. 85a; Heimer & Nentwig, 1992: f. 597; Roberts, 1995: p.366]
Distribution: Circum-Holarctic boreo-nemoral range: from Spain (Helsdingen, 1969) to south Kuriles (personal data), north to Lapland (Palmgren, 1975), Perm (Esyunin & Efimik, 1996), and middle Yenisei (Eskov, 1988c), south to Azerbaijan (Mikhailov, 1997), and Anhui (Song et al., 1999). In Nearctic known from Rocky Mts to Newfoundland (Buckle, personal communication).
Neriene clathrata (Sundevall, 1830): 07, 08; MFLT: Sgg. (Eskov 1992).

***Neriene emphana* (Walckenaer, 1841)** Map 97
[Helsdingen, 1969: f. 294-304; Heimer & Nentwig, 1992: f. 598; Roberts, 1995: p.368]
Distribution: Trans-Palaearctic nemoral range: from France to Japan and Kuril Islands (Helsdingen, 1969),
north to southern Finland (Palmgren, 1975) and north Ural (Esyunin & Efimik, 1996), and south to Azerbaijan (Mikhailov, 1997) and Fujian (Song et al., 1999). In Nearctic known east of 100°W, and north of 35°N (Helsdingen, 1969).
Neriene emphana (Walckenaer, 1841): 01, 17; ILT: Mm; MFLT: Sgg. (Eskov 1992).

***Neriene montana* (Clerck, 1758)** Map 97
[Helsdingen, 1969: f. 92-101; Roberts, 1987: 83c, 84c; Heimer & Nentwig, 1992: f. 595; Roberts, 1995: p.366]
Distribution: Trans-Palaearctic boreo-nemoral range: from Spain (Helsdingen, 1969) to south Kuril Islands (personal data), north to south Lapland (Palmgren, 1975) and Nizhnyaya Tunguska (Eskov, 1988c) and south to Tajikistan (Mikhailov, 1997) and southern Japan (Tsurusaki, personal communication).
Neriene montana (Clerck, 1758): 17, 55, 63; ILT: U, Mm. (Eskov 1992).

***Neriene radiata* (Walckenaer, 1841)** Map 106
[Helsdingen, 1969: f. 315-324; Roberts, 1987: f. 86a; Heimer & Nentwig, 1992: f. 593; Roberts, 1995: p.368]
Distribution: Circum-Holarctic boreo-nemoral range: from Spain (Helsdingen, 1969) to South Kuril Islands (personal data), north to south Lapland (Palmgren, 1975) and north Ural (Esyunin & Efimik, 1996), in Siberia known from below 55°N (Eskov, 1994), and south to Italy, northern Turkey (Helsdingen, 1969), Azerbaijan (Mikhailov, 1997), southern China (Song et al., 1999) and southern Japan (Tsurusaki, personal communication). In Nearctic known from Alaska to Newfoundland, south to California and Florida (Dondale et al., 1997).
Neriene radiata (Walckenaer, 1841): 07, 09, 14, 17, 23, 27, 30, 31, 32, 58; ILT: Mm, U; MFLT: Sms, Sss, Sgg. (Eskov 1992: sub. *N. marginata*).

***Notioscopus jamalensis* Grese, 1909** Map 100
[Grese, 1909: f. 4]
Distribution: Siberian boreo-hypoarctic range (Marusik et al., 1996): from south Yamal to middle Lena River (65°N), northeast to upper Kolyma (ca 63°N) and southward to Altai, Tuva (Logunov et al., 1998) and Central Mongolia (Marusik & Logunov, 1998b).
Comments. While this species was never properly depicted, we know it thanks to comparative material given to us by Eskov, who has studied "topotypes".
Notioscopus jamalensis Grese, 1909: 07, 08, 35, 36, 40, 56; MFLT: Mf. (Eskov 1992).

***Obscuriphantes pseudoobscurus* (Marusik et al., 1996)** Map 100
[Marusik et al., 1996: f. 14-16, 19-21; Esyunin & Efimik, 1998b: f. 27-28]
Distribution: Trans-Siberian boreal range: from Polar Ural southward to Tuva and Central Aimak (personal data), and northeast to Chukotka Peninsula (Marusik et al., 1996).
Lepthyphantes pseudoobscurus Marusik, Hippa & Koponen, 1996: 08, 56; MFLT: Mf. (Eskov 1992: sub. *L. obscurus*).

***Oedothorax agrestis* (Blackwall, 1853)** Map 97
[Wiehle, 1960: f. 817-826; Palmgren, 1976: f. 7.11,13-15; Roberts, 1987: f. 22d; Heimer & Nentwig, 1992: f. 606]
Distribution: Euro-Baikalian boreo-nemoral range: from western Europe to Podkamennaya Tunguska River (Eskov, 1988c), north to Lapland (Palmgren, 1976) and south to Yugoslavia (Nikolić, 1981) and West Sayany.
Oedothorax agrestis (Blackwall, 1853): 04, 05; GLT: Sm; ILT: Rpb; MFLT: Mf. (Eskov 1992).

****Oedothorax gibbosus* (Blackwall, 1841)** Map 105
[Wiehle, 1960: f. 837-845; Palmgren, 1976: f. 8.10-15; Roberts, 1987: 21e-g, 22b]
Distribution: Euro-Mongolian boreo-nemoral range: from western Europe to Tuva (Eskov & Marusik, 1994), and north to southern Finland (Palmgren, 1976), north Ural (Esyunin & Efimik, 1996) and lower-middle Yenisei River (Eskov, 1988c).
Comments. We (Logunov et al., 1998) missed the record of this species from Tuva mentioned by Eskov & Marusik (1994) in locality #7a. Identification made by K. Eskov was based on a single female. Females in this genus are very similar to each other, and taking this into account, as well the easternmost position of this locality, it is easy to assume that this record may refer to another species.

***"Oedothorax" mongolensis* (Heimer, 1987)** Map 107
[Heimer, 1987: f. 12-17]
Distribution: West Mongolian range: from western Tuva southeast to Bayankhongor (Heimer, 1987).
Oedothorax mongolensis (Heimer, 1987): 60; MSLT: Cxs. (Eskov 1992).

***Oedothorax retusus* (Westring, 1851)** Map 105
[Wiehle, 1960: f. 807-816; Palmgren, 1976: f. 7.22, 8.1-2,4-6; Roberts, 1987: f. 22e; Heimer & Nentwig, 1992: f. 603]
Distribution: Euro-Yakutian boreo-nemoral range: from Portugal (Cardoso, 1999) to Lena River (Marusik et al., 1993), north to Arctic coast in Scandinavia (Palmgren, 1976), Polar Ural (Esyunin & Efimik, 1996), Putorana Plateau (Eskov, 1988c) and lower Lena River flow, and south to Yugoslavia (Nikolić, 1981) and Xinjiang (Song et al., 1999).
Oedothorax retusus (Westring, 1851): 02, 07, 17; GLT: Sm; ILT: Mm; MFLT: Mf, Sgg. (Eskov 1992).

***Oreonetides sajanensis* Eskov, 1991** Map 100
[Eskov, 1991a: f. 5-6]
Distribution: "Yenisei" boreal range: known from three localities, one in Podkamennaya Tunguska (Eskov & Marusik, 1994) and two in West Sayany.
Comments. In our check-list of Tuvan spiders we missed Eskov's (1991) record, actually the type locality, of this species. This locality is situated just between our localities #1 & #2.
Oreonetides sajanensis Eskov, 1991: 04; GLT: Sm.

***Oreonetides vaginatus* (Thorell, 1872)** Map 104
[Palmgren, 1975: f. 3.15-17; Roberts, 1987: f. 68a; Heimer & Nentwig, 1992: f. 607]
Distribution: Circum-Holarctic hypoarcto-boreo-montane range: from Pyrenees to Chukotka Peninsula, north to Lapland (Palmgren, 1975), Polar Ural (Esyunin & Efimik, 1996), Putorana Plateau (Eskov, 1988c), and south to central Mongolia (Marusik & Logunov, 1998b) and Hokkaido (Tsurusaki, personal communication). In Nearctic known from Alaska to Greenland and Newfoundland, south to Arizona and northern New England (Dondale et al., 1997).
Oreonetides vaginatus (Thorell, 1872): 31, 34, 40, 56; ILT: Ism; MFLT: Mf.

***Oryphantes geminus* (Tanasevitch, 1982)** Map 107
[Tanasevitch, 1982: f. 2.6-9, 3.3-4; Marusik et al, 1996: f. 7, 11a, 13a; Saaristo & Tanasevitch, 1996: f. 15a]
Distribution: Uralo-Baikalian boreal range: from Polar Ural to Cisbaikalia, south to Tuva and Altai (Marusik et al., 1996).
Oryphantes geminus (Tanasevitch, 1982): 07; MFLT: Mf. (Eskov 1992: sub. *Lepthyphantes g.*).

***Panamomops depilis* Eskov & Marusik, 1994** Map 108
[Eskov & Marusik, 1994: f. 15-19]
Distribution: West Mongolian range: from East-Kazakhstan Area to eastern Tuva and north to south part of Krasnoyarsk Province (Eskov & Marusik, 1994).
Panamomops depilis Eskov & Marusik, 1994: Sayano-Shushensky Reservation, 52; MFLT: Sms (?). (Eskov & Marusik 1994).

***Panamomops dybowskii* (O.P.-Cambridge, 1873)** Map108
[Eskov & Marusik, 1994: f. 20; Marusik et al., 1996: f. 24-27]
Distribution: Uralo-Baikalian boreal range: from Ural to Cisbaikalia, north to Polar Ural and Norilsk, and south to Altai and Tuva (Eskov, 1994; Marusik et al., 1996).
Panamomops dybowskii (O.P.-Cambridge, 1873): 02, 04, 40, 44, 56; GLT: Mwt. (Eskov 1992).

***Panamomops tauricornis* (Simon, 1881)** Map 105
[Wiehle, 1960: f. 388-397; Heimer & Nentwig, 1992: f. 614]
Distribution: Trans-Palaearctic nemoral range: from Alps (isolated population) to north Ural and along South Siberia eastward to North Sakhalin, southeast to Maritime Province (Eskov, 1994) and southward to Central Mongolia (Marusik & Logunov, 1998b).
Panamomops tauricornis (Simon, 1881): 26, 27, 31, 34; GLT: Mwt; ILT: Ism; MFLT: Mf, Lf.

***Paraeboria jeniseica* (Eskov, 1981)** Map 108
[Eskov, 1981a: f. 4.1-6]
Distribution: Siberian boreal range: from Yenisei northeast to upper Kolyma and southward to Tuva and Sakhalin (Eskov, 1994).
Paraeboria jeniseica (Eskov, 1981): 07; MFLT: Mf. (Eskov 1992).

***"Parawubanoides" marusiki* Tanasevitch, 1987** Map 103
[Tanasevitch, 1987: f. 7-11]
Distribution: Siberian (?) boreal range known from NE Siberia (Marusik et al., 1992a) and Tuva and western-central Mongolia (Marusik & Logunov, 1998b & personal data).
Comments. This species is not congeneric with the generotype, *P. unicornis* (Tanasevitch & Saaristo, personal communication) and therefore its generic name is given quotes. It seems that *"P." marusiki* restricted to NE Siberia only, and south Siberian population (Tuva and Mongolia) belongs to an undescribed species (Tanasevitch, personal communication). Inhabits chiefly flood plain forests.
Parawubanoides marusiki (Tanasevitch, 1987): 09, 12, 14, 20, 30, 31, 35, 36, 49, 58, 63; ILT: Rpb, U; MFLT: S, Lf, Sms. (Eskov 1992, Eskov & Marusik 1992a).

***Parawubanoides unicornis* (O.P.-Cambridge, 1973)** Map 107
[Loksa, 1965: f. 13-14]
Distribution: Siberian boreo-nemoral range: from Tuva (Logunov et al., 1998) toward to upper Kolyma and Kamchatka (Eskov, 1994) and southward to Central Mongolia (Marusik & Logunov, 1998b).
Parawubanoides unicornis (O.P.-Cambridge, 1873): 07, 08a, 27, 30, 31, 35, 36; MFLT: Mf, Lf. (Eskov 1992, Eskov & Marusik 1992a).

***Pelecopsis dorniana* Heimer, 1987** Map 103
[Heimer, 1987: f. 22-27; Eskov, 1989b: f. 48-52]
Distribution: Siberian hypoarcto-boreal range (Marusik et al., 1996): from Altai via Tuva, West Sayany, Buryatia, and the Sokhondo Reserve (Eskov, 1992), southward to Central Mongolia (Marusik & Logunov, 1998b), north to Putorana Plateau (Eskov, 1989b) and Central Yakutia (upper Yana), and northeast to eastern parts of Chukotka Peninsula (171°W) (Marusik et al., 1992a, 1993).
Comments. Inhabits forests with herbaceous mesophytic vegetation or moss.
Pelecopsis dorniana Heimer, 1987: 02, 08a, 11, 26, 27, 40, 42, 52, 56; GLT: Mwt; MFLT: Mf, Sms. (Eskov 1992).

***Pelecopsis minor* Wunderlich, 1995** Map 114
[Wunderlich, 1995: f. 110-115]
Distribution: Mongolian range: from Tuva to south-central Chita Area (personal data) and south to South Gobi (Marusik & Logunov, 1998b).
Comments. Dry meadow and steppe dwelling species.
New localities: 09, 53.
**Pelecopsis minor* Wunderlich, 1995: 32, 63; ILT: Ism.

***Pelecopsis palmgreni* Marusik & Esyunin, 1998** Map 114
[Marusik & Esyunin, 1998: f. 1-2, 5-6]
Distribution: West Mongolian range: from East-Kazakhstan Area (Marusik & Esyunin, 1998) south-east to Bayankhongor (Marusik & Logunov, 1998b).
Pelecopsis palmgreni Marusik & Esyunin, 1998: 22, 27, 35, 40, 52, 56; MFLT: Mf. (Eskov & Marusik 1994: sub. *P. mengei*).

***Pelecopsis parallela* (Wider, 1834)** Map 109
[Palmgren, 1976: f. 1815-19; Roberts, 1987: f. 24d; Heimer & Nentwig, 1992: f. 619; Wunderlich, 1995: f. 116]
Distribution: Trans-Palaearctic boreo-hypoarctic range: from Europe northeast to Chukotka Peninsula and Wrangel Island.
Comments. Specific assignment of specimens from South Ural and Tuva is unclear. They may belong to the south Siberian sibling species *P. minor* Wunderlich, 1995. Conspecifity of high Arctic specimens (Taimyr Peninsula, Wrangel Island, Chukotka Peninsula) with these from Central Europe, south Finland and boreal Siberia requires confirmation.
Pelecopsis parallela (Wider, 1834): 08a, 23; MFLT: ?. (Eskov 1992).

****Pelecopsis parvicollis* Wunderlich, 1995** Map 115
[Wunderlich, 1995: f. 117-121]
Distribution: West Mongolian range: from Tuva to Middle Gobi (Wunderlich, 1995).
Locality: 34.

***Perlongipalpus* sp. 1**
Comments: Thos is an undescribed species. The record of *P. pinipumilis* Eskov & Marusik, 1991 from Bulgan Aimak, Mongolia (Wunderlich, 1995) no doubt refers to another species (Jörg Wunderlich kindly supply us with illustrations of the Mongolian specimen) and it is probable that the Tuvan and Mongolian populations are conspecific.
Perlongipalpus sp. 1 (*cf. pinipumilis*): 30; MFLT: Lf.

***Perregrinus deformis* Tanasevitch, 1982** Map 110
[Tanasevitch, 1982: f. 1.1-4, 2.1-5, 3.1-2]
Distribution: Tran-Siberio-trans-Nearctic hypoarcto-nemoral range: from Polar Cisuralia southward to Altai (Marusik et al., 1996),Tuva, Central Mongolia and Jilin (Eskov, 1994), northeast to upper Kolyma (Marusik et al., 1992a). In Nearctic widespread from Yukon Territory to Quebec (Dondale et al., 1997).
Perregrinus deformis (Tanasevitch, 1982): 07, 31, 40, 52, 54, 56; MFLT: Mf. (Eskov 1992).

***Pityohyphantes phrygianus* (C.L .Koch, 1836)** Map 110
[Palmgren, 1975: f. 9.4-7; Roberts, 1987: f. 82b; NH: f. 625; Roberts, 1995: p.364]

Distribution: Circum-Holarctic (?) boreo-nemoral range: from western Europe to North Sakhalin, north to Lapland (Palmgren, 1975), northern Ural (Esyunin & Efimik, 1996) and Central Yakutia (Marusik et al., 1993), in Siberia south to Altai (Marusik et al., 1996) and Tuva, Far East Asia recorded from Kyushu (Tsurusaki, personal communication) and Hainan (Song et al., 1999) islands. In Nearctic known from Alaska to Newfoundland, south Alberta and south-eastern Ontario (Dondale et al., 1997).
Comments. Records from SE Asia as well as all W Nearctic records may refer to another species.
Pityohyphantes phrygianus (C.L .Koch, 1836): 07; MFLT: Mf. (Eskov 1992).

***Pocadicnemis pumila* (Blackwall, 1841)** Map 109
[Wiehle, 1960: f. 683-691; Millidge, 1975: f. 21-25; Roberts, 1987: f. 20d; Heimer & Nentwig, 1992: f. 627]
Distribution: Circum-Holarctic (?) nemoral range: Europe, Caucasus, north and west Tien-Shang, throughout south Siberia (Eskov, 1994) to Kuril Islands (personal data) and southward to Mongolia (Marusik & Logunov, 1998b) and Japan (Tsurusaki, personal communication).
Comments. Distribution of this species in Nearctic is obscure due to three sibling species living there (Millidge, 1975). We have studied more than dozen of specimens from Yukon Territory belonging to *P. pumila*, while Dondale et al. (1997) reported on another species, *P. americana* Millidge, 1975 from there.
Pocadicnemis pumila (Blackwall, 1841): 14, 17, 33, 49, 58; ILT: U, Bf. (Eskov 1992).

***Poeciloneta petrophila* Tanasevitch, 1989** Map 114
[Tanasevitch, 1989: f. 16-21]
Distribution: Siberio-NW Nearctic boreo-montane range: from Tuva (Logunov et al., 1998) to north Cisokhotia, upper Kolyma and Chukotka (Marusik et al., 1992a). In Nearctic found only in Yukon Territory (Dondale et al., 1997).
Comments. About half a dozen of specimens were found in screes within mountain tundra.
Poeciloneta petrophila Tanasevitch, 1989: 52, 54; GLT: Mst.

***Poeciloneta theridiformis* (Emerton, 1911)** Map 106
[Zorsch, 1937: f. 46-48; Eskov & Marusik, 1994: f. 52-53]
Distribution: Siberio-Nearctic boreal range: from Polar Ural (Koponen et al., 1998) southward to Tuva and Sakhalin and eastward to upper Kolyma (Eskov & Marusik, 1994). In Nearctic known from New Hampshire (Roth, 1988) and Quebec (Bélanger & Hutchinson, 1992).
Poeciloneta theridiformis (Emerton, 1911): 08; MFLT: Mf. (Eskov & Marusik 1994).

***Poeciloneta variegata* (Blackwall, 1841)** Map 110
[Holm, 1970: f. 24; Roberts, 1987: f. 71d; Tanasevitch, 1989: f. 1-5]
Distribution: Trans-Palaearctic-West Nearctic hypoarcto-boreo-montane range: all of Europe and Ural, southward to Tien-Shang and Tibet (Eskov, 1994) and northeast to Chukotka (Marusik et al., 1992a). In Nearctic known from Alaska to Washington (Dondale et al., 1997).
Poeciloneta variegata (Blackwall, 1841): 07, 35, 63; ILT: U; MFLT: ?. (Eskov 1992).

***Porrhomma pygmaeum* (Blackwall, 1834)** Map 111
[Palmgren, 1975: f. 17.13-14; Roberts, 1987: f. 56a, 58a; Heimer & Nentwig, 1992: f. 638]
Distribution: Trans-Palaearctic nemoral range: from Europe via south Siberia to Sakhalin and Kamchatka, southward to Caucasus, Pamir (Eskov, 1994) and Mongolia (personal data).
Porrhomma pygmaeum (Blackwall, 1834): 07; MFLT: Mf. (Eskov 1992).

***Praestigia kulczynskii* Eskov, 1979** Map 113
[Eskov, 1979: f. 3-5, 11-14]
Distribution: Trans-Siberian-trans-Nearctic boreo-nemoral range: from Ural northward to lower Lena River, southward to Tuva, Khabarovsk and Hokkaido (Eskov, 1994). In Nearctic known from Yukon Territory to Newfoundland, south to southern Alberta and Maine (Dondale et al., 1997).
Praestigia kulczynskii Eskov, 1979: 17, 30, 58; ILT: U. (Eskov 1992).

***Praestigia pini* (Holm, 1950)** Map 115
[Palmgren, 1976: f. 23.15-17]
Distribution: Trans-Palaearctic boreal range: from north Scandinavia (Palmgren, 1976) via South Ural and South Siberia to South Sakhalin (Eskov, 1994).
Praestigia pini (Holm, 1950): 07, 20; ILT: U; MFLT: Mf. (Eskov 1992).

***Pseudocyba miracula* Tanasevitch, 1984** Map 119
[Holm, 1973: f. 34; Tanasevitch, 1984a: 2.1-8]
Distribution: Siberian boreal range: from Polar Ural northward to Yenisei Gulf, southward to East Kazakhstan Area and Tuva, northeast to upper Kolyma.
Comments. Forest litter dweller, occurring chiefly in flood plain forests.
Pseudocyba miracula Tanasevitch, 1984: 09, 12, 20, 31, 32, 36; ILT: U; MSLT: Dns. (Eskov 1992).

***Saloca ryvkini* Eskov & Marusik, 1994** Map 119
[Eskov & Marusik, 1994: f. 54-60]
Distribution: "Yenisei" boreal range: from Podkamennaya Tunguska south to West Sayany (Eskov & Marusik, 1994).
Saloca ryvkini Eskov & Marusik, 1994: 07a; ILT: U; MFLT: Sm. (Eskov & Marusik 1994).

***Satilatlas marxii* Keyserling, 1886** Map 113
[Millidge, 1986: f. 1, 3, 5, 7-8, 17-20, 32-33]
Distribution: Siberio-Nearctic boreal (?) range: in Siberia known from Tuva only (Eskov, 1994). In Nearctic known to be distributed from Manitoba to Nova Scotia, south to Missouri, and in north Aleutians (probably mislabelled, cf. Millidge, 1981b).
Comments. Judging from the very unusual distribution pattern, Tuvan specimens may belong to another species.
Satilatlas marxi Keyserling, 1886: 08 ; MFLT: Mf. (Eskov 1992).

***Savignya centrasiatica* Eskov, 1991**
[Eskov, 1991b: f. 3.1-4]
Distribution: Tuvan range: known from central Tuva only.
Savignia centrasiatica Eskov, 1991: 12, 17; ILT: U. (Eskov 1991, 1992).

***Savignya frontata* Blackwall, 1833** Map 113
[Wiehle, 196: f. 999-1007; Palmgren, 1976: f. 16.5-8; Tanasevitch, 1985: f. 20-22; Roberts, 1987: f. 36c, 39]
Distribution: Euro-Mongolian boreo-nemoral range: from Iceland (Wiehle, 1960) east to middle Siberia, north to Lapland (Palmgren, 1976), north Ural (Esyunin & Efimik, 1996) and middle-lower Yenisei River (Eskov, 1988c), and south to Azerbaijan (Mikhailov, 1997), East-Kazakhstan Area and Tuva (Eskov, 1992).
Savignia frontata Blackwall, 1833: 07, 26, 30, 31; GLT: Mwt; MFLT: Mf, Lf. (Eskov 1992).

***Savignia nenilini* Marusik, 1988** Map 121
[Tanasevitch, 1985: f. 13-19; Marusik, 1988: f. 15-18; Eskov, 1988: f. 75, 87]
Distribution: Trans-Siberian hypoarcto-boreo-montane range: from Polar to Middle Ural (Esyunin & Efimik, 1996), southward to Central Mongolia (Marusik & Logunov, 1998b) and Cisamuria, north up to Putorana Plateau (Eskov, 1994) and north-east to upper Kolyma (Marusik et al., 1992).
Comments. Material identified by Eskov (Eskov & Marusik, 1994) no doubt belongs to this species. *S. birostra,* a sibling species, occurs within Asia in coastal parts of the Russian Far East only.
New locality: 52.
? *Savignia birostra* (Chamberlin & Ivie, 1947): 07a; ILT: U, Ism. (Eskov & Marusik 1994).

***Scotargus pilosus* Simon, 1913** Map 111
[Helsdingen, 1973: f. 1-10; Thaler, 1987: f. 6; Tanasevitch, 1990: f. 23.14, 24.11; Heimer & Nentwig, 1992: f. 550]
Distribution: Euro-Central Asian nemoral-montane range: from Spain (in caves, Helsdingen, 1973) and France east to Tuva (north-easternmost locality), south to Nepal (Thaler, 1987). In Asia known also from mountainous areas of Caucasus, Tien-Shang, Pamir and Himalayas.
Scotargus pilosus Simon, 1913: 35; ?.

***Scotinotylus alpigenus* (L. Koch, 1869)** Map 111
[Palmgren, 1976: f. 26.4-5; Heimer & Nentwig, 1992: f. 656]
Distribution: Trans-Palaearctic boreo-montane range: from Alps and Lapland in Europe southward to north Tien-Shang (Mikhailov, 1997) and Central Mongolia (Eskov, 1994), throughout whole Siberia to Maritime Province in the south and north Cisokhotia in the north-east.
Scotinotylus alpigenus (L. Koch, 1869): 11, 26, 54; GLT: Mwt; MFLT: Lf. (Eskov 1992).

***Scotinotylus alpinus* (Banks, 1896)** Map 112
[Millidge, 1981a: f. 3, 51-57
Distribution: Siberio-Trans-Nearctic boreo-hypoarctic range: from Yenisei north to Lena River mouth, southward to Tuva and Mongolia, north-east to North Cisokhotia (Eskov, 1994). In Nearctic known from Alaska to Greenland and Colorado (Millidge, 1981a).
Scotinotylus alpinus (Banks, 1896): 27, 31; MFTL: Mf.

***Scotinotylus altaicus* Marusik et al., 1996** Map 121
[Marusik et al., 1996: f. 28-34]
Distribution: Tuvan range: from eastern Altai to south-central Tuva (Marusik et al., 1996).

Comments. In the previous survey (Logunov et al., 1998*),* we missed to underlining locality #26.
New locality: 03.
Scotinotylus altaicus Marusik, Hippa & Koponen, 1996: 26, 30; GLT: Mwt; MFLT: Mf, S.

***Scotinotylus protervus* (L. Koch, 1879)** Map 112
[Millidge, 1981a: f. 5, 67-73]
Distribution: Siberio-NW Nearctic hypoarcto-montane range: from Yenisei and Tuva in west, northeast to Chukotka (Eskov, 1994; Logunov et al., 1998). In Nearctic known from Alaska, Yukon and northern British Columbia (Dondale et al., 1997).
Comments. Always associated with stones, either with moraine boulders, slate stones or screes.
Scotinotylus protervus (L. Koch, 1879): 26, 27, 35, 40, 52, 54, 56; GLT: Mwt; MFLT: Lf. (Eskov 1992).

***Semljicola angulatus* (Holm, 1963)** Map 122
[Palmgren, 1976: f. 25.9-10; Saaristo, Eskov, 1996: f. 2a-g]
Distribution: Trans-Palaearctic hypoarcto-montane range: from north Fennoscandia southward to Mongolia and north-east to Chukotka and Kamchatka (Eskov, 1994; Saaristo & Eskov, 1996).
Semljicola angulata (Holm, 1963): 07; 23; MFLT: ?. (Eskov 1992: sub. *Eboria a.*, Saaristo & Eskov 1996: fig. 14).

***Semljicola latus* (Holm, 1939)** Map 123
[Holm, 1943: f. 8a-d, III.23-25; Saaristo & Eskov, 1996: f. 10a-g]
Distribution: Trans-Palaearctic boreal range: from north Scandinavia southward to Tuva (Saaristo & Eskov, 1996) and Mongolia (Marusik & Logunov, 1998b) and northeast to upper Kolyma.
Semljicola latus (Holm, 1939): 07; 26, 27, 35, 36, 52; GLT: Mwt; MFLT: Mf, Lf. (Eskov 1992: sub. *Latithorax l.*, Saaristo & Eskov 1996: fig. 15).

***Semljicola thaleri* (Eskov, 1981)** Map 122
[Eskov, 1981a: f. 1.5-8, 2.3-4; Saaristo & Eskov, 1996: f. 13a-j]
Distribution: Siberian boreal range: from south Yamal southward to East-Kazakhstan Area and eastward to Kamchatka (Saaristo & Eskov, 1996).
Semljicola thaleri (Eskov, 1981): Sayano-Shushensky Reservation, 31, 40, 52, 54, 56; ?. (Eskov 1992: sub. *Latithorax t.*, Saaristo & Eskov 1996: fig. 15).

***Sibirocyba incerta* Kulczyński, 1916** Map 123
[Eskov & Marusik, 1994: f. 34-37]
Distribution: Trans-Siberian boreo-hypoarctic range: from Polar Ural to Chukotka Peninsula and Wrangel Isl., south to Tuva and upper Kolyma (Eskov, 1994).
Comments. Exclusively inhabits open pebbly creek banks within forest belt.
Sibirocyba incerta (Kulczynski, 1916): 35, 56; ILT: Rpb.

? ***Silometopoides sphagnicola* Eskov & Marusik, 1992** Map 112
[Eskov & Marusik, 1992b: 3, 4, 8, 11, 14, 15]
Distribution: Siberian boreo-hypoarctic range: from South Yamal and Taimyr southward to Tuva and northeast to upper Kolyma, Kamchatka (Eskov, 1994) and possibly South Kuril Islands (personal data).
Comments. In Chukotka and Nearctic vicariates the sibling *S. pampia* (Chamberlin,

1948). A question mark remains because we have a single female. There is a slight possibility that it could be conspecific with *S. mongolensis* Eskov & Marusik, 1992, known only from the Chita Area and eastern Mongolia.
? *Silometopoides sphagnicola* Eskov & Marusik, 1992: 22; MFLT: Mf.

***Silometopus elegans* (O.P.-Cambridge, 1872)** Map 116
[Wiehle, 1960: f. 498-505; Palmgren, 1976: f. 20.5-10; Roberts, 1987: f. 26a]
Distribution: Euro-Mongolian boreo-nemoral range: from western Europe to Tuva, north to Lapland (Palmgren, 1976) and middle Yenisei River, south to North Caucasus (Wiehle, 1960; Eskov, 1994; Mikhailov, 1997).
Silometopus elegans (O.P.-Cambridge, 1872): 07; MFLT: Mf. (Eskov 1992).

***Silometopus uralensis* Tanasevitch, 1985** Map 122
[Tanasevitch, 1985: f. 1-3, 8-9]
Distribution: West-Middle Siberian boreal range: from South Yamal (Tanasevitch, 1985) to Podkamennaya Tunguska, and south to Tuva (Eskov, 1994).
Silometopus uralensis Tanasevitch, 1985: 02, 04, 07, 08a, 26, 31, 44; GLT: Mwt, Sm; ILT: U; MFLT: Mf. (Eskov 1992).

***Sisis transbaikalicus* (Eskov, 1989) *sensu* Wunderlich (1995)** Map 9-49
[Eskov, 1989: f. 43-53; Wunderlich, 1995: f. 100-109]
Distribution: Mongolian range: from Tuva to Buryatia (Eskov, 1989) and south to north Mongolia (Wunderlich, 1995).
Comments. A single female from locality #35 fits Wunderlich's (1995) illustration well, but differs Eskov (1989) illustration.
Sisis transbaikalicus (Eskov, 1989): 35; MFLT: ?.

***Stemonyphantes conspersus* (L. Koch, 1879)** Map 116
[Helsdingen, 1968: f. 39-40; Heimer & Nentwig, 1992: f. 667]
Distribution: Euro-Baikalian boreo-nemoral range: from Czechia to Cisbaikalia, north to Polar Ural, and south to East-Kazakhstan Area (Eskov, 1994).
Stemonyphantes conspersus (L. Koch, 1879): 02, 05, 07, 11, 20, 31; GLT: Sm; ILT: U; MFLT: Mf, Lf. (Eskov 1992).

? *Stem**onyphantes sibiricus* (Grube, 1861)** Map 120
Distribution: Siberian boreo-nemoral range: from Xinjiang ?, Altai (Marusik et al., 1996) and Yenisei (Eskov, 1988b) toward to the Maritime Province and Kunashir Island (Eskov, 1994), and northeast to Anadyr Town (personal data).
Comments. Re-examination of several males from Tuva has revealed they are more similar to *S. lineatus* (Linnaeus, 1758) than to *S. sibiricus*, but they are definitely are not conspecific with the European form. An earlier study of males belonging to *S. sibiricus* from NE Siberia led us to the conclusion that this species is very similar to Nearctic *S. blauveltae* Gertsch, 1951 and could even be a senior synonym thereof. Lack of comparative material from America prevents us from coming to a final conclusion.
Stemonyphantes sibiricus (Grube, 1861): 31, 36, 56; ILT: U.

***Styloctetor logunovi* (Eskov & Marusik, 1994)** Map 125
[Eskov & Marusik, 1994: f. 6-9; Marusik & Tanasevitch, 1998: f. 1-3, 12]
Distribution: Mongolian range: from south part of Krasnoyarsk Province and Tuva southeast to South Gobi (Marusik & Tanasevitch, 1998).
Styloctetor logunovi (Eskov & Marusik, 1994): 05, 20, 27, 31, 53, 56; ILT: Rpb; MSLT: Dns, S. (Eskov & Marusik 1994).

***Styloctetor romana* (O.P.-Cambridge, 1872)** Map 118
[Roberts, 1987: f. 29a; Marusik & Tanasevitch, 1998: f. 4, 11]
Distribution: Trans-Palaearctic hypoarcto-nemoral range: from Iberian Peninsula (Cardoso, 1999) to Chukotka (Marusik et al., 1992), in Siberia from Tuva to Chukotka Peninsula (Marusik & Tanasevitch, 1998), north to Putorana Plateau (Eskov, 1988c).
Styloctetor romanus (O.P.-Cambridge, 1872): 55; ILT: ?. (Eskov 1992).

***Styloctetor stativa* (Simon, 1881)** Map 117
[Wiehle, 1960: f. 452-460; Palmgren, 1976: f. 18.20-24; Roberts, 1987: f. 29a; Marusik & Tanasevitch, 1998: f. 5-7, 14]
Distribution: Circum-Holarctic boreo-nemoral range: from western France (Prószyński & Staręga, 1971) to Central Chukotka (Marusik et al., 1992), north to south Finland (Palmgren, 1976), middle Yenisei (Eskov, 1988c), and south to Yugoslavia (Prószyński & Staręga, 1971) and Maritime Province (Mikhailov, 1997). In Nearctic known from Yukon to Newfoundland (Dondale et al., 1997).
Styloctetor stativus (Simon, 1881): 08a, 31, 35; ?. (Eskov 1992).

***Styloctetor tuvinensis* Marusik & Tanasevitch, 1998**
[Marusik & Tanasevitch, 1998: f. 15-18]
Distribution: Tuvan range: known from a single locality only.
Styloctetor tuvinensis Marusik & Tanasevitch, 1998: 32; ILT: U, Rpb.

***Tanasevitchia uralensis* (Tanasevitch, 1983)** Map 125
[Marusik & Saaristo, 1999: f. 7-9, 16-17]
Distribution: Trans-Siberian hypoarctic range: from Polar and Middle Ural eastward to upper Kolyma and southward to Sayany Mts. (Marusik & Saaristo, 1999).
Comments. Throughout whole range associated with screes, especially screes covered with *Cetraria* lichens.
Minicia uralensis Tanasevitch, 1983: 02, 04; GLT: Sm, S.

***Tenuiphantes nigriventris* (L. Koch, 1879)** Map 127
[Holm, 1945: f. 16a-d; Holm, 1973: f. 73-75; Palmgren, 1975: f. 12.8-10; Thaler et al., 1977: f. 47-51; Song et al., 1999: f. 103E-F,O]
Distribution: Trans-Palaearctic boreal range: from Lapland eastward to Kamchatka and Commander Islands, north to Polar Ural, and south to Tuva (Eskov, 1994) and Jilin (Li & Tao, 1995).
Comments. Inhabits mixed and larch forest with *Carex*.
Lepthyphantes nigriventris (L. Koch, 1879): 02, 05, 11, 23, 40; GLT: Sm; MFLT: Lf. (Eskov 1992).

***Thaleria orientalis* Tanasevitch, 1984** Map 127
[Tanasevitch, 1984a: f. 1.1-10; Eskov & Marusik, 1992c: f. 24-31]
Distribution: West-Middle Siberian boreal range: from Polar Ural (Koponen et al., 1998) and South Yamal (type locality) to West Sayany.
Comments. A single male collected on the north macroslope of West Sayany and studied by Eskov (1992) belongs to the true *T. orientalis,* while the female collected in the

Sangilen Mts, another mountain system, belongs to an undescribed sibling species. So actually this species is present in locality #05 only.
? *Thaleria orientalis* Tanasevitch, 1984; 05, 31; MFLT: Mf. (Eskov 1992).

***Thaleria cf. orientalis* Tanasevitch, 1984**
[Tanasevitch, 1984a: f. 1.1-10; Eskov & Marusik, 1992c: f. 24-31]
Distribution: East Tuvan boreal range: Sangilen Mt. range.
Comments. A single female of this species was found in Sangilen Mt. range. While it is similar to the true *T. orientalis*, study of type material and numerous topotypes reveals that they are not conspecific. So actually it was recorded from locality # 31.
? *Thaleria orientalis* Tanasevitch, 1984; 05, 31; MFLT: Mf. (Eskov 1992).

***Thaleria sajanensis* Eskov & Marusik, 1992** Map 124
[Eskov & Marusik, 1992c: f. 32-33; Marusik et al., 1996: f. 37-38]
Distribution: Mongolian montane range*:* from south Khakassia east to western Cisbaikalia (Eskov, 1992) and south to SE Tuva.
Thaleria sajanensis Eskov & Marusik, 1992: 02, 05, 07, 26, 27, 31, 35, 36, 40, 52, 54, 56; GLT: Mwt; MFLT: Mf, Lf. (Eskov 1992).

***Thyreosthenius biovatus* (O.P.-Cambridge, 1875)** Map 129
[Wiehle, 1960: f. 776-784; Palmgren, 1976: f. 18.30-33; Roberts, 1987: f. 32e; Heimer & Nentwig, 1992: f. 682]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to north Cisokhotia (Marusik et al., 1992a), north to Lapland (Palmgren, 1976) and Magadan, and in Siberia south to West Sayany.
Comments. Besides Tuva, and north Cisokhotia there are only two records of this species east of the Ural, viz. Yugunasky Reserve in western Siberia (Esyunin, 1996) and Altai (Marusik et al., 1996), but it seems to be more widely distributed.
Thyreosthenius biovatus (O.P.-Cambridge, 1875): 02; GLT: Sm.

***Tibioploides arcuatus* (Tullgren, 1955)** Map 129
[Tullgren, 1955: XIII.39d, XIV.39; Palmgren, 1975: f. 23.5-7; Millidge, 1977: f. 11; Eskov & Marusik, 1991: f. 22-25]
Distribution: Trans-Palaearctic boreal range: from southern Finland (Palmgren, 1975) to Sakhalin, north to Norilsk and south to Maritime Province (Eskov, 1994).
Tibioploides arcuatus (Tullgren, 1955): 01, 05, 19, 31; ILT: U; MFLT: Mf. (Eskov 1992).

***Tibioplus diversus* (L. Koch, 1879)** Map 124
[Chamberlin & Ivie, 1947: f. 80-81; Millidge, 1977: f. 156; Wunderlich, 1995: f. 122-124]
Distribution: Trans-Palaearctic-NW Nearctic boreal range: from north Fennoscandia through Polar Ural and South Yamal, Tyumen Area and Putorana Plateau to Magadan Area, Kamchatka and Kuril Islands (personal data), south to Altai, Mongolia (personal data), Tuva and Sakhalin Island (Eskov 1988c, 1990b, 1992). In Nearctic known from Alaska and Yukon Territory only (Dondale et al., 1997).
Comments. Litter dweller in forests with mesophytic vegetation.
Tibioplus diversus (L. Koch, 1879): 02, 04, 05, 07, 26, 30, 31, 32, 35, 36, 40, 52, 56, 63; GLT: Mwt, Mst; ILT: U; MFLT: Mf, S. (Eskov 1992).

***Tiso aestivus* (L. Koch, 1872)** Map 117
[Palmgren, 1976: f. 19.4-5; Roberts, 1987: f. 29e; Heimer & Nentwig, 1992: f. 684]
Distribution: Circum-Holarctic hypoarcto-boreal range: mountains of South and Central Europe, Fennoscandia, Caucasus, north Tien-Shang, in Siberia from Polar Ural to Altai and Mongolia, southeast to Hokkaido and north-east to Chukotka Peninsula (Eskov, 1994; Marusik et al., 1992a). In Nearctic known from Yukon Territory and Greenland (Dondale et al., 1997).
Tiso aestivus (L. Koch, 1872): 08a, 26, 27, 40, 52, 54, 56; MFLT: Mf, Sms. (Eskov 1992).

***Tmeticus affinis* (Blackwall, 1855)** Map 118
[Roberts, 1987: f. 43e; Heimer & Nentwig, 1992: f. 686]
Distribution: Trans-Palaearctic boreo-nemoral range: from north Europe (Heimer & Nentwig, 1992) via middle and south regions of Siberia (including Mongolia) northeast to Kamchatka and North Cisokhotia (Eskov, 1994).
Tmeticus affinis (Blackwall, 1855): 08, 23, 63; ILT: U; MFLT: Mf, Lf. (Eskov 1992).

***Trematocephalus cristatus* (Wider, 1934)** Map 129
[Wiehle, 1960: f. 344-351; Roberts, 1987: f. 12d, 16g]
Distribution: Trans-Palaearctic nemoral range: from western Europe to the Russian Far East, north to southern England (but does not occur in Finland and Estonia) and middle Ural (Esyunin & Efimik, 1996), in Asia south to Azerbaijan (Mikhailov, 1997) and Hubei (Song et al., 1999).
Comments. It is one of a few Trans-Palaearctic species, which are, present in Siberia but absent in Finland.
Trematocephalus cristatus (Wider, 1934): 14; ILT: U.

***Trichobactrus brevispinosus* Wunderlich, 1995** Map 128
[Wunderlich, 1995: f. 125-129]
Distribution: Mongolian range: besides Mongolia (unknown locality, Wunderlich, 1995) known only from Tuva.
Comments. A steppe dwelling species.
**Trichobactrus brevispinosus* Wunderlich, 1995: 34, 53, 63; ILT: Ism; MSLT: S.

***Trichoncus vasconicus* Denis, 1944** Map 130
[Wiehle, 1960: f. 582-587; Palmgren, 1976: f. 17.8-10; Roberts, 1987: f. 28e; Heimer & Nentwig, 1992: f. 688, 691]
Distribution: Euro-Yakutian nemoral (?) range: from western Europe to south-central Yakutia, north to northern coast of the Gulf of Bothnia (south Lapland) (Palmgren, 1976) and middle Lena River (Marusik et al., 1993), south to Yugoslavia (Nikolić, 1981), north Caucasus (Tanasevitch, 1990) and East-Kazakhstan Area (Eskov & Marusik, 1995).
Comments. Northernmost records in Europe are restricted to the coastal areas.
Trichoncus vasconicus Denis, 1944: 09; MFLT: Sss.

***Trichopterna cito* (O.P.-Cambridge, 1872)** Map 130
[Wiehle, 1960: f. 81-90; Palmgren, 1976: f. 9.18-22; Roberts, 1987: f. 23f 24b; Heimer & Nentwig, 1992: 696]
Distribution: Euro-Mongolian (?) nemoral range: from western Europe to Tuva, north to southern coasts of England and Finland (Roberts, 1987; Palmgren, 1976), south to Yugo-

slavia and Azerbaijan (Nikolić, 1981; Tanasevitch, 1990). Record of this species from Hubei (Song et al., 1999), geographically very distant from other known localities, probably refers to another species (e.g. *Pelecopsis minor*).
Comments. In locality #53 it was recorded due to misidentification, in fact this record refers to *P. minor*.
Trichopterna cito (O.P.-Cambridge, 1872): 09, 30, **53**; MFLT: Sms; MSLT: Dbs.

***Trichopterna thorelli* (Westring, 1862)** Map 131
[Wiehle, 1960: f. 72-80; Palmgren, 19776: f. 9.28-31; Roberts, 1987: f. 23e, 24a; Heimer & Nentwig, 1992: f. 695]
Distribution: Distribution: Euro-Mongolian boreo(?)-nemoral range: from western Europe to Tuva, north to Scotland (Roberts, 1987) and southern Finland (Palmgren, 1976), and south to Italy (Wiehle, 1960). A record of this species from South Yamal (Esyunin & Efimik, 1996), geographically rather distant from other known localities, may belong to another species.
Trichopterna thorelli (Westring, 1862): 07; MFLT: ?. (Eskov 1992).

***Troxochrus scabriculus* (Westring, 1851)** Map 131
[Wiehle, 1960: f. 854-860; Palmgren, 1976: f. 18.1-4; Roberts, 1987: 30a, 31a-b; Heimer & Nentwig, 1992: f. 705]
Distribution: Euro-Yenisei boreo-nemoral range: from Portugal (Cardoso, 1999) to middle-lower Yenisei River (Eskov, 1988c), north to Lapland (Palmgren, 1976), south to Yugoslavia (Nikolić, 1981) and Tuva.
Comments. References to the occurrence of this species in Nearctic (Eskov, 1988c) as well as in northern Africa were probably based on wrong identifications. In Roth=s (1988) check-list of Nearctic linyphiids there is no entry for this species.
Troxochrus scabriculus (Westring, 1851): 31; ?.

***Typhochrestoides baikalensis* Eskov, 1990** Map 126
[Eskov, 1990: f. 3.1-3; Marusik et al., 1996: f. 39-42]
Distribution: North Mongolian boreal range: from Altai to south part of Krasnoyarsk Province and south Cisbaikalia southward to Arkhangai (Eskov, 1994; Marusik et al., 1996; Logunov et al., 1998; Marusik & Logunov, 1998b).
Comments. Inhabits larch forest litter.
Typhochrestoides baikalensis Eskov, 1990: 02, 04, 26, 27, 30, 35, 52; GLT: Sm, Mst, Mwt; MFLT: Mf, S.

***Ummeliata sibirica* (Eskov, 1980)** Map 128
[Eskov, 1980b: f. 1-8]
Distribution: South Siberian boreo-nemoral range: from middle-lower Yenisei River to Khabarovsk, south to NE Tuva (Eskov, 1994) and south Transbaikalia (personal data).
Ummeliata sibirica (Eskov, 1980): 07; MFLT: ?. (Eskov 1992).

***Victorium putoranicum* Eskov, 1988 Map** 128
[Eskov, 1988a: 7.1-5]
Distribution: Trans-Siberian boreal range: from middle Ural northward to Putorana Plateau, southward to Sayany and middle Sakhalin and eastward to upper Kolyma (Eskov, 1988d, 1994).

Comments. Petrophilous species, associated with gravels in subhorizontal surfaces along mountain ridges.
Victorium putoranicum Eskov, 1988: 02; GLT: Mwt, Mst. (Eskov 1992).

***Wabasso questio* (Chamberlin, 1948)** Map 132
[Millidge, 1984: f. 112-113, 116-117, 119, 121-122]
Distribution: Subcircum-Holarctic hypoarcto-boreal disjunctive (?) range: in Eurasia known from five areas: Iceland (Agnarsson, 1996), in northern Fennoscandia (Koponen, 1976; Millidge, 1984), South Yamal, Podkamennaya Tunguska and NE Tuva only (Eskov, 1994). In Nearctic recorded east of 95°W to SW Greenland and north of 60°N (Millidge, 1984).
Comments. Large disjunction between Siberian and Nearctic populations could mean either that they are not conspecific or that specimens simply have not yet been collected in between.
Wabasso questio (Chamberlin, 1948): 07, 56; MFLT: ?. (Eskov 1992).

***Walckenaeria antica* (Wider, 1834)** Map 135
[Wiehle, 1960: f.187-200; Palmgren, 1976: f. 2, 21.16-20; Roberts, 1987: 4a,c, 8b; Heimer & Nentwig, 1992: f. 716]
Distribution: Euro-Yenisei (?) boreo-nemoral range: from western Europe to Yenisei (Eskov, 1994), north to Lapland (Palmgren, 1976) and Polar Ural (Esyunin & Efimik, 1996), south to Yugoslavia (Nikolić, 1981), Azerbaijan and Kyrgyzstan (Mikhailov, 1997).
Comments. As *W. antica* is part of a series of Holarctic sibling species, namely *W. fraudatrix* (see below), *W. alticeps* (Denis, 1952) (Europe), and *W. golovatchi* Eskov & Marusik, 1994 (Sakhalin), it is not certain which species was actually studied by Eskov (1992), especially because two species are listed in his catalogue (Eskov, 1994) from the same area, *W. antica* and *W. fraudatrix*, and the later species (both sexes) was found in several places. Probably Yenisei is the distributional limit for these two species and Eskov's records refer to *W. fraudatrix*.
Walckenaeria antica (Wider, 1834): 08a, 11, 23; MFLT: Lf. (Eskov 1992).

***Walckenaeria auranticeps* (Emerton, 1882)** Map 132
[Millidge, 1983: f. 254-255, 257, 267-268, 273, 276]
Distribution: Siberio-Nearctic boreal range: in Siberia known only from two areas: Tuva and south part of Magadan Area. It may have a wider distribution but it has been confused with the sibling *species W. lepida*. In Nearctic known from Yukon Territory to Labrador (Millidge, 1983).
Walckenaeria auranticeps (Emerton, 1882): 58; ILT: U. (Eskov 1992).

***Walckenaeria capito* (Westring, 1861)** Map 132
[Millidge, 1983: f. 93, 97-101; Roberts, 1987: f. 6c, 9b; Heimer & Nentwig, 1992: f. 711]
Distribution: Subcircum-Holarctic boreo-nemoral range: from Europe to Caucasus via North Ural and Putorana Plateau to upper Kolyma and north-east Cisokhotia (Taigonos Peninsula) (Marusik et al., 1992a; Eskov, 1994). In Nearctic known from a single locality near the Great Lakes (Eskov, 1994). Judging from small and eastern distribution in Nearctic in contrast to wide range in Palaearctic, it appears to be introduced to North America.
Walckenaeria capito (Westring, 1861): 05; MFLT: Mf. (Eskov 1992).

***Walckenaeria cuspidata* Blackwall, 1833** Map 133
[Wiehle, 1960: f. 263-268; Palmgren, 1976: f. 22.21-24; Millidge, 1983: f. 7, 284-291, 301-302; Roberts, 1987: 5d, 8i; Heimer & Nentwig, 1992: f. 725]
Distribution: Subcircum-Holarctic (?) boreo-nemoral range: from western Europe to Kamchatka, north to Lapland (Palmgren, 1976), South Yamal (Esyunin & Efimik, 1996) and north Cisokhotia (Marusik et al., 1992a), and south to Yugoslavia (Nikolić, 1981) and Tuva. In Nearctic known as a separate subspecies *W. c. brevicula* (Crosby et Bishop, 1931) from Utah to New Brunswick (Millidge, 1983), but possibly distributed much wider.
Walckenaeria cuspidata Blackwall, 1833: 02, 31; GLT: ?. (Eskov 1992).

****Walckenaeria fraudatrix* Millidge, 1983** Map 127
[Millidge, 1993: f. 298-300; Eskov, Marusik, 1994: f. 106-108; Wunderlich, 1995: f. 130-132]
Distribution: Siberio-NW American hypoarcto-nemoral range: from Yenisei southward to Central Aimak and to Jilin ? (Li & Tao, 1995, sub *W. antica* (Wider, 1834) and north-east to Chukotka and north-western Nearctic (Eskov, 1994; Dondale et al., 1997).
Localities: 02, 04, 09, 30.

***Walckenaeria karpinskii* (O. P.-Cambridge, 1873)** Map 133
[Millidge, 1993: f. 260, 262, 265, 277-278, 280, 282; Efimik & Esyunin, 1996: f. 4g, 5e-f]
Distribution: Circum-Holarctic arcto-boreo-montane range: from north Fennoscandia via Siberia to Chukotka Peninsula (Eskov, 1994) and southward to Tuva (Logunov et al., 1998), Mongolia (Marusik & Logunov, 1998b) and Jilin (Li & Tao, 1995). In Nearctic known from Alaska to Greenland (Millidge, 1993).
Walckenaeria karpinskii (O.P.-Cambridge, 1873): 02, 07, 20, 23, 26, 27, 30, 31, 35, 36, 40, 42, 56; GLT: Sm, Mwt; MFLT: Mf, Lf. (Eskov 1992: sub. *W. holmi*).

***Walckenaeria kazakhstanica* Eskov, 1995** Map 135
[Eskov & Marusik, 1995: f. 25-26; Efimik & Esyunin, 1996: f. 1-2
Distribution: Uralo-Tuvan steppe range: from south Ural (Esyunin & Efimik, 1996) to Tuva, and south to East-Kazakhstan Area (Eskov & Marusik, 1995).
Walckenaeria kazakhstanica Eskov, 1995: 19; ILT: U. (Eskov 1992).

***Walckenaeria koenboutjei* Baert, 1994** Map 136
[Baert, 1994: f. 1-9]
Distribution: Mongolian boreal range: from western Khakassia to south Cisbaikalia (Baert, 1994).
New locality: 04.
Walckenaeria koenboutjei Baert, 1994: 02; GLT: Mst. (Baert 1994).

***Walckenaeria korobeinikovi* Esyunin & Efimik, 1996** Map 134
[Roberts, 1987: ?f. 5b, 8g; Heimer & Nentwig, 1992: f. 723; Efimik & Esyunin, 1996: f. 3a-d, 4d-f, 5c-d,h]
Distribution: Trans-Siberian polyzonal range? (or Trans-Palaearctic polyzonal range): from Polar and north Ural to Chukotka (Efimik & Esyunin, 1996) and southward to Mongolia (Marusik & Logunov, 1998b) and Japan (Tsurusaki, personal communication). It is very likely that all European records of *W. clavicornis* (Emerton, 1882) should be referred to this species.

Walckenaeria korobeinikovi Esyunin & Efimik, 1996: 40, 47, 52, 63; GLT: Mst; ILT: Bf. (Eskov & Marusik 1994: sub. *W. clavicornis*).

***Walckenaeria lepida* (Kulczyński, 1885)** Map 138
[Millidge, 1983: f. 256, 258, 274]
Distribution: Circum-Holarctic (?) boreal range: from Scandinavia (Dondale et al., 1997) via Polar Ural to Kamchatka and southward to Maritime Prov. and Tuva (Eskov, 1994). In Nearctic known from Alaska to Labrador (Millidge, 1983).
New locality: 63.
Walckenaeria lepida (Kulczynski, 1885): 07, 20; ILT: U; MFLT: Mf. (Eskov 1992).

***Walckenarianus aimakensis* Wunderlich, 1995** Map 126
[Wunderlich, 1995: f. 139-147]
Distribution: Siberian hypoarcto-nemoral range: from Tuva (Logunov et al., 1998) southward to Central Aimak and northward to Central Yakutia and northeast to Magadan Area (unpublished data).
**Walckenaerianus aimakensis* Wunderlich, 1995: 6; ILT: Bf.

***Wubanoides uralensis* (Pakhorukov, 1981)** Map 134
[Eskov, 1986: f. 1-9]
Distribution: Euro-Baikalian hypoarcto-boreal disjunctive range: isolated population in highlands of Czechia, Polar Cisuralia, the Yenisei River, Cis- and Transbaikalia (eastward to south-central Chita Area), Tuva and Mongolia (Eskov & Marusik 1992a).
Wubanoides uralensis (Pakhorukov, 1981): 04, 26, 27, 35, 36, 52, 56; GLT: S, Sm; MFLT: Mf, Lf. (Eskov 1992, Eskov & Marusik 1992).

***Yakutopus xerophilus* Eskov, 1990** Map 136
[Eskov, 1990: 5.1-5; Marusik et al., 1996: f. 43-44]
Distribution: Altai-Yakutian boreal range: from Altai (Marusik et al., 1996) to central Yakutia (Marusik et al., 1993).
Yakutopus xerophilus Eskov, 1990: 09, 30, 32, 49, 53, 63; ILT: U; MFLT: Lf, Sms; MSLT: Dns.

***Zornella cf. cultrigera* (L. Koch, 1879)** Map 134
[Palmgren, 1976: f. 5.9-12]
Distribution: E Siberian (?) boreal range: from SW Yakutia to upper Kolyma. Belonging of Tuvan and Transbabaikalian populations is unclear. This species is very close to *Z. cultrigera* and females of two species are indistinguishable.
Zornella sp. 1 (*cf. cultrigera*): 05, 07, 19, 20, 23, 31, 35, 36, 40, 54; ILT: U; MFLT: Mf, Lf. (Eskov 1992: sub. *Z. cultrigera*).

LIOCRANIDAE

***Agroeca maculata* (L. Koch, 1879)** Map 137
[Holm, 1973: f. 109-110]
Distribution: Siberian boreal range: from E Kazakhstan and Perm Area northeast to upper Kolyma and southward to Central Mongolia (Mikhailov & Marusik, 1995).
Agroeca maculata L. Koch, 1879: 07; MFLT: Mf.

***Agroeca* sp. 1**
Comments. Inhabits dry screes and of stony debris below cliffs.

Agroeca sp. 1: 09, 12, 13, 30, 32, 35, 44, 52; MFLT: S; MSLT: S, Dns.

"Phrurolithus" sinicus Zhu & Mei, 1982 Map 137
[Song, 1987: f. 285a-d; Danilov, 1999: f. 4b; Song et al., 1999: f. 239S, 240A-B, 241A-B]
Distribution: Mongolo-Manchurian range: from Tuva eastward to Jilin, southward to Zhejiang (Song et al, 1999).
Comments. Steppe dwelling species, very common in stone placers.
"*Phrurolithus" sinicus* Zhu & Mei, 1982: 09, 14, 31, 32, 53; ILT: Rpb; MSLT: Dbs, S.

LYCOSIDAE

***Acantholycosa lignaria* (Clerck, 1758)** Map 135
[Holm, 1947: VIII.82-83, X.47; Fuhn & Niculescu-Burlacu, 1971: f. 24a-e]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Maritime Province of Russia and Kamchatka (Mikhailov, 1997), north to Lapland (Holm, 1947) and north Ural (Esyunin & Efimik, 1996), and south to Inner Mongolia (Song et al., 1999) and Maritime Province. Record from Kamchatka (cf. Prószyński & Staręga, 1971; Esyunin & Efimik, 1996; Mikhailov, 1997) requires confirmation.
Acantholycosa lignaria (Clerck, 1758): 13; MFLT: Bef.

***Acantholycosa norvegica* (Thorell, 1875)** Map 142
[Holm, 1947: 16, VIII.84-85; Buchar, 1966: 4a-c; Fuhn & Niculescu-Burlacu, 1971: f. 26.a-d; Heimer & Nentwig, 1992: f. 832; Song et al., 1999: f. 186B]
Distribution: Trans-Palaearctic boreo-alpine disjunctive range: highlands of Central Europe, Fennoscandia, Cispolar to South Ural (Esyunin & Efimik, 1996), in Siberia from Altai (Marusik et al., 1996), Tuva and the Yenisei River southward to Mongolia and Chita Area (Logunov & Marusik ,1995), toward Central Yakutia (ca 65^{o}N, Marusik et al., 1993) and northeast to upper Kolyma (Marusik et al., 1992a).
Comments. Scree dweller within forest and mountain tundra belts.
Acantholycosa norvegica (Thorell, 1872): 02, 03, 04, 07, 26, 27, 31, 35, 36, 56; GLT: Sm, Mwt; MFLT: S,Sms, Mf.

****Acantholycosa sterneri* (Marusik, 1993)** Map 139
[Marusik, 1993: f. 1-3]
Distribution: Mongolian range: from West Sayany via Khubsugul Aimak of Mongolia to south-central Chita Area (Kronestedt, Marusik, personal data).
Comments. Scree dweller in mountain tundra belt.
Locality: close to #4 (2m & 1f, 35-40 km SW of Oiskoye Lake, 11.06.1990, coll. N.A.Gladkevitch & S.E.Chernyshov*)*

? *Acantholycosa triangulata* Yu & Song, 1988 Map 139
[Yu & Song, 1988: f. 28-30; Song et al., 1999: f.186C-D]
Distribution: West Mongolian range: from Xinjiang (Song et al., 1999) to Tuva, and south to South Gobi (Marusik & Logunov, 1998b).
Comments. Scree dweller within mountain tundra.
**Acantholycosa triangulata* Yu & Song, 1988: 47; GLT: Mst.

***Allohogna singoriensis* (Laxmann, 1770)**
[Fuhn & Niculescu-Burlacu, 1971: ?f. 96.a-e]

Distribution: Euro-Mongolian (Baikalian?) steppe range: from Austria to middle Ural, southward to Bulgaria and Turkmenia, eastward to Inner Mongolia and Baikal (Marikovski, 1956; Fuhn & Niculescu-Burlacu, 1971; Esyunin & Efimik, 1996). Within China known from Xinjiang and Inner Mongolia (Yin et al., 1997; Song et al., 1999).
Comments. Record from south Cisbaikalia (Marikovski, 1956) probably refers to *A. sinensis* Schenkel, 1953. All specimens from Cisbaikalia studied by us (YM) belong to the latter species. Records at the southern limit of its range, such as North Africa (Egypt), Asia Minor, south part of Central Asia needs confirmation. On the other hand, it is almost doubtless that European and Asian populations of *A. singoriensis* are not conspecific (personal data).
Allohogna singoriensis (Laxmann, 1770): 21, 49, 57, 58; ILT: saline wasteland.

***Alopecosa aculeata* (Clerck, 1757)** Map 138
[Kronestedt, 1990: f. 3A, 4A, 5A,a, 6A,C,E, 7A, 8A-D, 10A, 11A, 12A, 13A-E; Dondale & Redner, 1990: f. 492-499; Heimer & Nentwig, 1992: f. 833]
Distribution: Circum-Holarctic polyzonal range (Marusik et al., 1996): widespread in East Palaearctic, in Siberia from Polar Ural (Esyunin & Efimik, 1997) and Xinjiang (Yin et al, 1997), Altai (Marusik et al., 1996) northward to Noril'sk (Eskov, 1988c) and northeast to Chukotka Peninsula (Marusik et al., 1992a), and south to Shandong (Song et al., 1999). In Nearctic known from Alaska to Newfoundland, south to Arizona and Connecticut (Dondale & Redner, 1990). It is possible that all southern Far East records (Maritime Prov., eastern China, and Hokkaido) refer to *A. virgata* (Kishida, 1909). The two species differ only in fine details of the palp (Kronestedt & Marusik, personal data).
Comments. Inhabits forests and mesophytic meadows.
Alopecosa aculeata (Clerck, 1758): 03, 04, 06, 07, 08, 11, 19, 22, 26, 27, 30, 35, 36, 40, 54, 56, 58; GLT: Sm, Mwt, S; ILT: U, Rpb; MFLT: Sms, Mf, Lf.

***Alopecosa albostriata* (Grube, 1861)** Map 139
[Kulczyński, 1908: f. 84, 89, 94]
Distribution: Siberian boreal range: from Yenisei River (Eskov, 1988c) to Lena River mouth and upper Kolyma and south to E Tuva and Transbaikalia (Marusik et al., 1992a, 1993; Logunov & Marusik, 1995; Logunov et al., 1998). South limit of range is unclear. It seems that all Chinese and south Ural records refer to *A. dimidiata* and related species.
Comments. Found in mountain larch forest with thick brown *Sphagnum* moss cover.
Alopecosa albostriata (Grube, 1861): 35, 36; MFLT: Lf.

***Alopecosa cinnameopilosa* (Schenkel, 1963)** Map 140
Pardosa lusisi Šternbergs, 1981: 60, f. 1a-b. **Syn.n.**
[Song et al., 1999: f. 186K, 187B]
Distribution: Mongolo-Manchurian range: from Xinjiang to Japan, north to Tuva and Buryatia (personal data), south to Anhui and Shandong (Song et al., 1999).
Comments. Original illustrations by Šternbergs (1981), as well as these of Schenkel and Chinese authors prove that specimens illustrated belong to the same species. Identity of two species was first indicated by T. Kronestedt (personal communication).
Pardosa lusisi Sternbergs, 1981: Yirban; MFLT: Sgg. (Sternbergs 1981).

***Alopecosa cuneata* (Clerck, 1757)**
[Fuhn & Niculescu-Burlacu, 1971: f. 69.a-f; Kronestedt, 1990: 4E, 5C, 8G, 10C, 11C,

12C; Roberts, 1995: p.224; Heimer & Nentwig, 1992: f. 841]
Distribution: Trans-Palaearctic (?) boreo-nemoral range: whole Europe to North Ural (Esyunin & Efimik, 1996), in Siberia throughout south belt to Kamchatka and southward to Xinjiang, Inner Mongolia (Yin et al., 1997) and Sakhalin (Mikhailov, 1997).
Comments. All records east of Baikal require re-examination. This species was not mentioned in the latest survey of Chinese spiders (Song et al., 1999).
Alopecosa cuneata (Clerck, 1758): 19, 27, 58; ILT: U, MFLT: Sms.

***Alopecosa dimidiata* (Thorell, 1875)**
[Schenkel, 1953: 71, f. 33a-c; Song et al., 1999: f. 186G,O].
Distribution: Trans-Palaearctic (?) steppe (?) range: from France to Heilongjiang and Japan (sub *A. albostriata*, Song et al., 1999), north to Tuva, and south to Shandong.
Comments. This species seems to have one of the longest list of synonyms amongst the Asian lycosids and, nevertheless, requires further investigation. Specimens from Tuva were identified as *A. dimidiata* by Zyuzin , who re-examined the types, and listed under this name (Logunov et al., 1998). Specimens listed as *Alopecosa* sp. 1 (*cf. erudita*) were identified by YM who has had no opportunity to re-study Thorell=s types of lycosids borrowed by Zyuzin from Swedish Museum of Natural History in the late 1970s but not returned yet.
All records of Chinese, Japanese and Korean authors of *A. albostriata* and all synonyms of this species (*erudita* Simon, 1880, *gertschi* Fox, 1935, *erudita mongolica* Schenkel, 1953, *albostriatoides* Schenkel, 1963, *fabifer* Schenkel, 1963, *luteocuneata* Schenkel, 1963, *paraalbostriata* Schenkel, 1963, *wiehlei* Schenkel, 1963 refer to *A. dimidiata*.
This species, or possibly group of species, inhabits exclusively steppe, semidesert and desert biotopes and makes burrows, while *A. albostriata* (types studied by Zyuzin) lives in South Siberia exclusively in larch taiga with moss litter, and rarely, in northern Siberia only, on pebbly beaches of rivers and creeks.
Our investigation of numerous specimens from south Siberia and Mongolia shows that there are possibly several sibling species, so perhaps some of the specific names can be taken off synonymy.
All specimens were found in steppe and semidesert biotopes.
Alopecosa dimidiata (Thorell, 1875): 09, 12, 23, 27, 30, 50, 53, 55, 63; MFLT: Sss; MSLT: Sds, Cxs, Dbs, Dns, S. (Mikhailov 1996: sub. *Trochosa d.*).
Alopecosa sp.1 (*cf. erudita*): 09, 21, 27, 28, 30, 32, 34, 53, 58, 63; ILT: Ism, Rpb; MFLT: Sss, Sms; MSLT: Dns, Dbs, Sds, S.

***Alopecosa hingganica* Tang, Urita et Song, 1993** Map 140
[Tang et al., 1993: f. 2a-b]
Distribution: Mongolian range: from Tuva (Logunov et al., 1998) to south-central Chita Area, via Mongolia to northern Inner Mongolia.
Comments. Meadow dweller.
**Alopecosa hingganica* Song, 1993: 48; ILT: Rpb.

***Alopecosa licenti* (Schenkel, 1953)** Map 135
[Schenkel, 1953: f. 36; Song, 1986: f. 14-17; Song et al., 1999: f. 187H,J]
Distribution: Mongolo-Chinese range: from Tuva (Logunov et al., 1998) to Heilongjiang, south to Sichuan and Shandong (Yin et al., 1997; Song et al., 1999).
**Alopecosa licenti* (Schenkel, 1953): 28; MSLT: Dbs.

***Alopecosa pinetorum* Thorell, 1856 Map 141**
[Holm, 1947: f. III.29; IX.12; Heimer & Nentwig, 1992: f. 846]
Distribution: Euro-Mongolian (?) range: from Europe to Tuva, north to Lapland (Koponen, 1976) and north Ural (Esyunin & Efimik, 1996), south to Tuva and highlands of south Europe (Heimer & Nentwig, 1992). Record of this species in Transbaikalia (cf. Danilov, 1990) requires re-examination.
? *Alopecosa pinetorum* Thorell, 1856: 05; MFLT: Mf.

***Alopecosa pulverulenta* (Clerck, 1757)** Map 142
[Kronestedt, 1990: f. 4F, 5D, 8H-I, 10D, 11D, 12D; Dondale & Redner, 1990: f. 511-513; Heimer & Nentwig, 1992: f. 844; Roberts, 1995: p.224]
Distribution: Trans-Palaearctic boreo-nemoral range: from Portugal (Cardoso, 1999) eastward to Kamchatka and south-western Aleutians (Dondale & Redner, 1990), north to Lapland, middle Yenisei (Eskov, 1988c) and North Cisokhotia (Marusik et al., 1992a), south to Georgia, Xinjiang and Shaanxi (Mikhailov, 1997; Song et al., 1999).
Alopecosa pulverulenta (Clerck, 1758): 02, 19, 31, 54; GLT: Sm; ILT: U.

***Alopecosa sibirica* (Kulczyński, 1908)** Map 140
[Kulczyński, 1908: f. 91-92]
Distribution: Siberian hypoarcto-boreal range: from Tuva (Logunov et al., 1998) and Central Mongolia (Marusik & Logunov, 1998b) toward Putorana Plateau (Eskov, 1988c), Yana River mouth (Kulczyński, 1908) and Chukotka (Chaun Bay, Marusik et al., 1992a).
Comments. Records from Heilongjiang, Inner Mongolia and Gansu (Yin et al., 1997; Song et al., 1999) probably refer to different species. Inhabits dry meadows bordering forests.
Alopecosa sibirica (Kulczynski, 1908): 36; MFLT:Sms.

***Alopecosa solivaga* (Kulczyński, 1901)**
[Kulczyński, 1901: f. 16]
Distribution: West Siberian (?) range: from Polar Ural (Esyunin & Efimik, 1996) southeast to Central Mongolia.
Comments. *A. solivaga* species group (*borea* (Kulczyński, 1908), *pictilis* (Emerton, 1885), *kulczynski* (Šternbergs, 1979), *hokkaidensis* Tanaka, 1985 and a few others) require revision. *A. solivaga* is very close to *A. borea* and lack of clear diagnosis makes identification difficult. Therefore the exact range limits of this species in the east are unknown. In East Siberia it is replaced by *A. borea.*
Alopecosa solivaga (Kulczynski, 1901): 08, 09, 11, 12, 14, 17, 19, 20, 21, 27, 30, 35, 36, 41, 42, 44, 48, 49, 51, 58, 63; ILT: U, As, Rpb; MFLT: Sss, Sms, S, Sm, Lf; MSLT: Dns.

***Alopecosa subrufa* Schenkel, 1963** Map 144
[Schenkel, 1963: f. 183; Song, 1986: 23-24; Song et al., 1999: f. 188B]
Distribution: Mongolian range: from Tuva (Logunov et al., 1998) to Heilongjiang, south to Qinghai and Jilin (Song et al., 1999).
Comments. All specimens were found in steppe communities.
**Alopecosa subrufa* Schenkel, 1963: 30, 34; ILT: Ism.

***Alopecosa zyuzini* Logunov & Marusik, 1995** Map 144
[Logunov & Marusik, 1995: f. 4-6, 9-12]

Distribution: Mongolian range: from Tuva (Logunov et al., 1998) eastward to Chita Area (Logunov & Marusik, 1995) and southward to Uburkhangai.
Comments. Steppe dwelling species.
Alopecosa zyuzini Logunov & Marusik, 1995: 17, 29, 30, 34, 36, 38, 46, 48, 49, 50, 51, 53, 55, 58, 61, 63; ILT: Ism, As, Rpb, Mm; MFLT: Sss; MSLT: Dbs, Sds, S. (Logunov & Marusik, 1995).

***Alopecosa* sp. 2**
Comments. This species is very similar to *A. dimidiata* and probably undescribed.
Alopecosa sp. 2 (*cf. erudita*): 55, 58, 63; MSLT: Sds.

***Alopecosa* sp. 3**
Comments. This species is very similar to *A. dimidiata* and probably undescribed. This species, as well as *Alopecosa* sp. 2 and *A. dimidiata,* dig burrows like *Allohogna* on south exposed slopes or sand dunes.
Alopecosa sp. 3 (*cf. erudita*): 41; MSLT: Cxs.

? ***Arctosa cervina* Schenkel, 1936**
[Eskov & Marusik, 1995: f. 57]
Distribution: Mongolian (?) range: from East-Kazakhstan Area (Eskov, Marusik, 1995) and Tuva (Logunov et al., 1998) southward to "Sud Kansu, Tan-chang" (Schenkel, 1936).
Comments. Records of *A. stigmosa* (Thorell, 1875) throughout China (Yin et al., 1997) may refer to this species. On the other hand, study of the holotype (YM) proved that illustrations given by Eskov & Marusik (1995) and all specimens found in Kazakhstan, Tuva and Mongolia are not conspecific with holotype, though very close.
Inhabits lake shores.
**Arctosa cervina* Schenkel, 1936: 34, 51, 63; ILT: Mm, As.

? ***Evippa sibirica* Marusik, 1995** Map 148
[Eskov & Marusik, 1995: f. 59-62; ?Peng et al., 1996: f.1-7]
Distribution: West Mongolian range: from East Kazakhstan Area (Eskov & Marusik, 1995), Altai (unpublished data) and Tuva southward to Gobi-Altai.
Comments. It is possible that *E. sibirica* is a complex of two species. If it is so, populations from east Tuva, Mongolia and China may be conspecific with *E. fujianensis* Peng et al., 1996. All species of *Evippa sensu lato* lives exclusively in arid zone in xerophilous habitats.
Evippa sp. 1 (*cf. sibirica*): 12, 30, 32, 34, 53; MFLT: Sss; MSLT: Dbs, Dns, S.

***Pardosa amentata* (Clerck, 1758)** Map 142
[Holm, 1947: f. VI.66-67, X.40; Heimer & Nentwig, 1992: f. 883; Roberts, 1995: p.218]
Distribution: Euro-Mongolian range: from western Europe to Tuva, north to Lapland (Koponen, 1976) and Cispolar Ural (Esyunin & Efimik, 1996), and south to southern Europe (Nikolić, 1981) and Tuva.
Pardosa amentata (Clerck, 1758): 01; MFLT: Sgg.

***Pardosa astrigera* (L. Koch, 1878)** Map 141
Distribution: Mongolo-Manchurian nemoral range: from northern Tuva to Japan (Tsurusaki, personal communication). Besides Tuva, in Siberia it is known from Cis- and Transbaikalia (personal data). Its exact range in China and Japan is unclear because of the presence of a series of sibling species (Kronestedt & Marusik, personal data). At least two sibling species occur in Tuva, and not less than two in Far East .

Comments. Inhabits dry meadows along river.
Locality: 09.

***Pardosa atrata* (Thorell, 1873)** Map 144
[Holm, 1947: f. VI.70-71, X.44; Song et al., 1999: 193D,L]
Distribution: Trans-Palaearctic hypoarcto-boreo-montane range: from Scandinavia and Estonia, northeast to upper Anadyr River and Kamchatka (Marusik et al., 1992a; Mikhailov, 1997), southward to Inner Mongolia (Song et al., 1999).
Comments. The record from Gansu (Yin et al., 1997) probably refers to a different species. At least the figures given in Yin et al. (1997) represent a different species. In North America *P. atrata* is replaced by *P. fuscula* (Thorell, 1875), and on Sakhalin Island, it is replaced with an undescribed sibling species (personal data).
Numerous specimens were found in various types of bogs from mountain tundra to bogs in sandy desert around Tere-Khol Lake.
Pardosa atrata (Thorell, 1873): 07, 23, 24, 32, 52, 55, 58, 63; ILT: U, Mm, Bf; MFLT: Sm.

***Pardosa baraan* Logunov & Marusik, 1995** Map 150
[Logunov & Marusik, 1995: f. 25-29, 33]
Distribution: Mongolian montane range: from Tuva in the west eastward to Chita Area and south to Mongolia (Logunov & Marusik, 1996).
Comments. Inhabits meadows in mountain tundra belt.
Pardosa baraan Logunov & Marusik, 1995: 24, 35, 45, 47, 52; GLT: Mst. (Logunov & Marusik, 1995).

***Pardosa bifasciata* (C.L. Koch, 1834)**
[Heimer & Nentwig, 1992: f. 878; Roberts, 1995: p.216]
Distribution: Euro-Mongolian (?) nemoral range: from Europe to Tuva, north to south Fennoscandia (Kronestedt, personal communication) south to southern Europe. Records of *P. bifasciata* in China east of Xinjiang probably refer either to *P. thaleri* Buchar, 1976 (Himalayas and Central Asian mountains), *P. bukukun* or *P. hanrasanensis* Jo et Paik, 1984 (Korea).
Pardosa bifasciata (C.L. Koch, 1834): 09, 13, 26, 27, 29, 30, 31, 35, 36, 44, 52; GLT: Mwt; MFLT: S, Sss, Sgg.

***Pardosa bukukun* Logunov & Marusik, 1995** Map 150
[Loksa, 1965: f. 26; Logunov & Marusik, 1995: f. 13-19]
Distribution: Mongolian steppe range: from Tuva (Logunov et al., 1998) eastward to Chita Area (Logunov & Marusik, 1995) and southward to Gobi Altai in Mongolia (personal data).
Comments. Inhabits steppes and dry meadows.
Pardosa bukukun Logunov & Marusik, 1995: 26, 27, 30, 56; GLT: Mwt; MFLT: Sss, Sms.

***Pardosa chionophila* L. Koch, 1879**
[Holm, 1973: f. 86, 90-91; Eskov, Marusik, 1995: f. 66-67]
Distribution: Middle Siberian (?) hypoarcto-boreal range: from lower Yenisei River (68°N) southward to Mongolia.
Comments. Western and eastern limits of the range are obscure. *P. chionophila* belongs to the *astrigera* species group represented in East Palaearctic by a series of sibling species (Kronestedt, Marusik, personal data). Females in the *astrigera* group are almost indistinguishable.

Pardosa chionophila L. Koch, 1879: 09, 14, 17, 49, 55, 58; ILT: As, U, Rpb, Mm.

***Pardosa eiseni* (Thorell, 1875)** Map 148
[Holm, 1947: f. VII.78-79, X.42; Heimer & Nentwig, 1992: f. 871]
Distribution: Trans-Palaearctic arcto-boreo-montane range: from north Scandinavia via Polar to South Ural (Esyunin & Efimik, 1996) , northward to Putorana Plateau (Eskov, 1988c) and Lena River mouth (Marusik et al., 1993), northeast to Chukotka Peninsula (Marusik et al., 1992a) and southward to Mongolia (Eskov 1989b) and Sakhalin (Marusik et al., 1992b; Mikhailov, 1997)
Comments. Inhabits mossy taiga forests.
Pardosa eiseni (Thorell, 1875): 08, 11, 22, 23, 26, 27, 35, 36, 40, 42, 44, 52, 54; GLT: Mwt; MFLT: Mf, Lf.

***Pardosa etsinensis* Schenkel, 1963** Map 150
[Schenkel, 1963: f. 214.a-b; Song & Haupt, 1995: f. 5; Song et al., 1999: f. 195J,P]
Distribution: Mongolian range: from Tuva and Xinjiang (sub *P. luctinosa* Simon, 1876, Hu & Wu, 1989) eastward to Heilongjiang, and southward to Gansu and Inner Mongolia (Yin et al., 1997).
Comments. Exact distribution of this halophilous species is unclear. It belongs to *luctinosa* species group, all species of which live on the shores of salt lakes, and therefore have very disjunct **Distribution:**
**Pardosa etsinensis* Schenkel, 1963: 34, 51, 57, 63; ILT: Rpb, Bf.

***Pardosa incilis* (Odenwall, 1901)**
[Yin et al., 1997: f. 101.d-e,?f-g]
Distribution: Trans-Mongolian (?) range: from Altai (personal data) eastward to Transbaikalia (type locality), and Heilongjiang(?), southward to Gansu, Sichuan(?) (sub *P. mongolica* Kulczyński, 1901, Yin et al., 1997.
Comments. *P. incilis* (= *P. hummeli* Schenkel, 1936) has wrongly been synonymised with *P. ricta* (= *P. mongolica* Kulczyński, 1901) by Zyuzin, 1979 (Zyuzin, personal communication) and it is not clear from which exact localities in China it has been recorded. The *ricta* species group sensu Zyuzin (1979) was revised by Marusik and Gajdoš (in press).
Pardosa incilis (Odenwall, 1901): 13, 25, 27, 32, 34, 39, 49, 50, 51, 53, 55, 57, 58, 63; ILT: U, Ism, As, U, Rpb, Bf; MFLT: Sss, Sms; MSLT: Sds, S.

***Pardosa indecora* (L. Koch, 1879)**
[Holm, 1973: f. 87]
Distribution: West-Middle Siberian (?) range: from Ural (Esyunin & Efimik, 1996) eastward to middle Lena River (ca 64°N, Marusik et al., 1993), southward to Mongolia.
Comments. Records of this species from Khabarovsk Province (Mikhailov, 1997) require re-examinations. Taiga dweller.
Pardosa indecora L. Koch, 1879: 03, 04, 05, 40; GLT: Mwt; MFLT: Mf.

***Pardosa jeniseica* Eskov et Marusik, 1995** Map 145
[Eskov & Marusik, 1995: f. 64-65]
Distribution: Trans-Siberian boreo-nemoral range: from North and Middle Ural (Esyunin et al., 1999) to East-Kazakhstan Area, and via Altai to upper Yenisei River, northeast to upper Kolyma (Marusik et al., 1992a) and southward to Mongolia (Marusik & Logunov, 1998b). Judging from illustrations given by Esyunin et al. (1999), specimens from Ural may belong to another species. In this case *P. jeniseica* is distributed east of East-Kazakhstan Area.
Comments. Inhabits pebbly river banks.
Pardosa jeniseica Eskov & Marusik, 1995: 09, 19, 20, 31, 49, 55; ILT: Mm, Rpb.

****Pardosa lapponica* (Thorell, 1872)** Map 143
[Holm, 1947: VII.72-73; X.46; Dondale & Redner, 1990: f. 210-213]
Distribution: Subcircum-Holarctic hypoarcto-boreo-montane range: from north Fennoscandia to north Ural (Esyunin & Efimik, 1996), southward to Altai (Marusik et al., 1996), Mongolia and possibly China (Yin et al., 1997), northeast to the Bering Strait (Marusik et al., 1992a). In Nearctic distributed from western Alaska to western shore of Hudson Bay (Dondale & Redner, 1990).
Comments. Inhabits sparse larch forests with moss litter and mountain tundra.
Localities: 26, 36, 42, 45.

***Pardosa cf. lapponica* (Thorell, 1872) #1** Map 151
[Loksa, 1965: ?f. 25]
Distribution: Mongolian range: from Tuva northeast to north Cisbaikalia and southward to Inner Mongolia (in part sub *P. uncifera* Schenkel, 1963).
Comments. Revision of *lapponica* species group is under preparation by Marusik & Kronestedt. Inhabits drier biotopes than its sibling *P. lapponica* and even occurs in steppe habitats near forest margins.
Pardosa sp. 1 (*cf. lapponica*): 14, 21, 23, 25, 26, 27, 30, 31, 36, 40, 44, 45, 48, 49, 53, 58; GLT: Mst, Mwt; ILT: U; MFLT: Mf, Sms; MSLT: Dbs.

***Pardosa cf. lapponica* (Thorell, 1872) #2** Map 152
Distribution: Trans-Siberian hypoarcto-nemoral range: from Yenisei and Tuva, southward to Mongolia and possibly to China, northeast to Chukotka (personal data).
Comments. Revision of *P. lapponica* species group is under preparation by Marusik & Kronestedt. Biologically similar to *P. cf. lapponica* #1 and these two species are often collected together. While only one sample out of more than a hundred contained both *P. lapponica* and this species.
Pardosa sp. 2 (*cf. lapponica*): 08, 11, 12, 22, 24, 26, 27, 35, 39, 40, 42, 45, 47, 52, 54, 56; GLT: Mst, Mwt; ILT: U, Mm; MFLT: Mf, Lf, Sms.

***Pardosa lasciva* L. Koch, 1879** Map 145
[Holm, 1947: f. VII.76-77, X.43; Holm, 1973: f. 92-100]
Distribution: Euro-Baikalian boreal range: from northern Sweden (Holm, 1947, 1973) to western Yakutia (Marusik et al., 1993), north to Polar Ural (Esyunin & Efimik, 1996) and middle Yenisei (Eskov, 1988c) and south to Tuva and Chita Area (Logunov & Marusik, 1995). Not found in Mongolia or China.
Pardosa lasciva L. Koch, 1879: 05, 11, 23, 31, 40; MFLT: Lf, Mf.

***Pardosa cf. lugubris* (Walckenaer, 1802)**
Comments. This species is very close to *P. lugubris* and can be distinguished only by careful comparison of specimens. We know this species from East-Kazakhstan to Buryatia, north to Novosibirsk.

Pardosa sp. 3 (*cf. lugubris*): 02, 09, 17, 19; GLT: S; ILT: U.

***Pardosa nenilini* Marusik, 1995** Map 151
[Eskov & Marusik, 1995: f. 68-71]
Distribution: Mongolian range: from East-Kazakhstan Area (Eskov & Marusik, 1995) southeast to Uburkhangai (Marusik & Logunov, 1998b).
Comments. It is probable that *P. nenilini* is a junior synonym of *P. soccata* Yu & Song, 1988 known from Xinjiang (Song et al., 1999). Inhabits over-grazed meadows chiefly around lakes within steppe.
Pardosa nenilini Marusik, 1995: 39; MFLT: Sm.

***Pardosa oksalai* Marusik et al., 1996** Map 151
[Marusik et al., 1996: f. 53-60]
Distribution: Yenisei range: from Altai to West Sayany (Marusik et al., 1996), north to middle Yenisei (personal data).
Comments. All Sayan specimens have been collected in moist mountain meadows (1260-1700 m) in forest and subalpine belts.
Pardosa oksalai Marusik, Hippa & Koponen, 1996: 02, 04, 05, 63; GLT: Sm, Mwt; ILT: Bf.

***Pardosa oljunae* Lobanova, 1978** Map 148
[Logunov & Marusik, 1995: f. 36-37]
Distribution: West Siberian range (Logunov & Marusik 1995): from South Yamal (Esyunin & Efimik, 1996) southward to Altai, Tuva and north-western Mongolia?
Comments. In Siberia east to middle Yenisei this species is replaced by a sibling species, *P. adustella* Roewer, 1951. Inhabits mesophytic meadows, shrubby areas, and mixed forest clearings.
Pardosa oljunae Lobanova, 1978: 05, 07, 08, 11, 12, 13, 22, 23, 26, 31, 35, 36, 40, 42, 52, 54, 56; GLT: Mwt; ILT: U; MFLT: Mf, Lf, Bef, Sm, Sgg.

***Pardosa palustris* (Linnaeus, 1758)** Map 143
[Fuhn & Niculescu-Burlacu, 1971: f. 52.a-e; Roberts, 1995: p.215; Dondale & Redner, 1990: f. 228-232; Heimer & Nentwig, 1992: f. 861]
Distribution: Trans-Palaearctic- Alaskan boreo-nemoral range: from Europe to central Chukotka (Marusik et al., 1992a), north to Lapland (Koponen, 1976) and Cispolar Ural (Esyunin & Efimik, 1996), southward to north-eastern Xinjiang (Hu & Wu, 1989), Mongolia and South Kuriles (personal data). In Nearctic known from Alaska to Yukon and northern British Columbia (Dondale et al., 1997).
Comments. Inhabits mesophytic meadows and grassy bogs.
Pardosa palustris (Linnaeus, 1758): 05, 06, 07, 12, 22, 23, 24, 27, 31, 35, 36, 48, 52, 56; ILT: U; MFLT: Sm, Sgg, Sms, Mf.

***Pardosa cf. paratesquorum* Schenkel, 1963** Map 15-57
[Schenkel, 1963: f. 208b]
Distribution: Mongolo-Manchurian (?) range: from Altai (Marusik et al., 1996) via South Siberia to south-central Chita Area (Logunov & Marusik, 1995) and southward to Gansu and Hebei (?) (Yin et al., 1997).
Comments. Study of type material of *P. paratesquorum* has revealed the female paratypes collected in Central Aimak of Mongolia are not conspecific with the male holotype. All our identifications of Russian and Mongolian materials were based on the well illustrated female. This rather common species in Tuva, Transbaikalia and Mongolia seems to be undescribed (Kronestedt & Marusik, personal data). Exact south limit of its distribution is unclear. Figures given for another sibling species, namely *P. tesquorumoides* Song et Yu, 1990 (cf. figs. 199b & j, Song et al., 1999) are not fitting at least to the male of Mongolian species.
Unlike the sibling species *P. tesquorum,* the present species is common in meadows and steppes close to water bodies.
Pardosa paratesquorum Schenkel, 1963: 12, 14, 19, 29, 30, 34, 39, 44, 48, 49, 50, 51, 52, 57, 58, 62, 63; ILT: Ism, As, Mm, U, Rpb; MFLT: Sm; MSLT: Dbs, Cxs.

***Pardosa plumipes* (Thorell, 1875)** Map 149
[Holm, 1968: f. 27-30; Tongiorgi, 1966: f. 12-13, 22, 32]
Distribution: Trans-Palaearctic boreo-nemoral range: from Scandinavia eastward to Yakutia, South Kuriles and Hokkaido (Marusik et al, 1992b, 1993; Tsurusaki, personal communication) and southward to northern Tien-Shang (personal data), Tibet and Sichuan (Song et al., 1999)
Comments. Inhabits meadows, both mesophytic and dry.
Pardosa plumipes (Thorell, 1875): 08, 09, 12, 17, 23, 24, 27, 29, 31, 32, 34, 40, 44, 48, 49, 51, 53, 57, 58, 62, 63; ILT: U, Mm, As, Rpb, Bf, Ism; MFLT: Sms, Sgg, Sm.

***Pardosa ricta* (Odenwall, 1901)** Map 149
[Loksa, 1965: f. 27-28]
Distribution: Siberio-Chinese range: from Altai (personal data) and Xinjiang (Hu & Wu, 1989) to Heilongjiang (Song et al., 1999), north to Yakutia (Marusik et al., 1993) and southward to Tibet (?), Nepal (?), Sichuan and Inner Mongolia (all records sub *P. mongolica*) (Song et al., 1999). It is possible that the Tibet-Himalayan population belongs to a separate species, *P. tikaderi* Buchar, 1984, wrongly synonymised with this species.
Comments. There is a sibling species in Mongolia and China, namely *P. incilis*, which has treated as a synonym of *P. mongolica.* Both sexes of the former species can be separated from *P. ricta.* Therefore, some Chinese records of this species refer to *P. Incilis*, and reports from south Xinjiang and Tibet may refer to another species.
Inhabits meadows and steppe.
Pardosa ricta (Odenwall, 1901): 12, 27, 29, 30, 31, 32, 34, 38, 39, 40, 44, 45, 49, 50, 51, 53, 55, 58, 63; ILT: Ism, As; MFLT: Sss; MSLT: Dns, Dbs, S, Cxs.

***Pardosa schenkeli* Lessert, 1904** Map 147
[Fuhn & Niculescu-Burlacu, 1971: f. 59.a-c; Heimer & Nentwig, 1992: f. 877; Logunov & Marusik, 1995: f. 20-24]
Distribution: Trans-Palaearctic boreo-nemoral range: highlands of Central Europe (Heimer & Nentwig, 1992), Caucasus, Fennoscandia (Palmgren, 1977), north to south Ural (Esyunin & Efimik, 1996) via south half of Siberia up to Central Yakutia (ca 64°N, Marusik et al., 1993) eastward to upper Kolyma (Marusik et al., 1992a) and Kamchatka (Mikhailov, 1997), southward to Mongolia (Marusik & Logunov, 1998b) and possibly to northern China.
Comments. In China it was recorded from Inner Mongolia and Shanxi (Yin et al., 1997), while figures fit the Manchurian species *P. hanrasanensis* Jo & Paik, 1984.
Pardosa schenkeli Lessert, 1904: 05, 07, 08, 09, 11, 21, 23, 25, 26, 27; GLT: Mwt, S; MFLT: Mf, Sss, Sms, Sgg.

***Pardosa selengensis* (Odenwall, 1901)** Map 149
[Odenwall, 1901: f. 15]
Distribution: Mongolian range: from Tuva (Logunov et al., 1998) eastward to Chita Area (Logunov & Marusik, 1995) and southward to Central Mongolia (Marusik & Logunov, 1998b). Eastern limit of distribution is unclear because of presence of sibling species (see **Comments**).
Comments. The figures, and at least some of the records, of *P. suwai* Tanaka, 1985 by Yin et al. (1997: figs. 97a-d) may refer to *P. selengensis.* Seminal receptacles in *P. suwai* (cf. Logunov, 1992b: 63, figs. 7a-) are much longer than shown in Yin et al. (1997). Epigynes of the two species are almost indistinguishable, but males show small but significant differences *(*Marusik & Kronestedt, personal data).
Inhabits dry meadows and steppe, usually close to water bodies.
Pardosa selengensis (Odenwall, 1901): 32, 34, 51, 53, 57, 63; ILT: Ism, As, Bf, U, Rpb; MFLT: Sm; MSLT: Sds, Dbs.

***Pardosa sphagnicola* (F. Dahl, 1908)** Map 143
[Holm & Kronestedt, 1970: f. 6, 11, II.5-6,13, IV.5-7]
Distribution: Euro-Mongolian boreo-nemoral range: from Iceland (Holm & Kronestedt, 1970) to Yenisei River (Eskov, 1988c), north to Lapland (Holm & Kronestedt, 1970; Koponen, 1976), and south to Altai (Marusik et al., 1996) and Tuva.
Pardosa sphagnicola (F. Dahl, 1908): 07; MFLT: Sm.

***Pardosa tesquorum* (Odenwall, 1901)** Map 146
[Odenwall, 1901: f. 5-6; Kulczyński, 1908: f. 108-109; Dondale & Redner, 1990: f. 185-189]
Distribution: Siberio-Subtrans-Nearctic arcto-nemoral range: from Polar Ural (Esyunin & Efimik, 1996) southward to Altai and Mongolia, northeast to Bering Strait (Marusik et al., 1992a). In Nearctic known to be distributed from Alaska southward to New Mexico (Dondale & Redner, 1990). While it is widespread in western half of Nearctic, there are only two records in eastern half, namely south corner of Hudson Bay and north Labrador (Dondale & Redner, 1990).
Inhabits pebbly river and creek banks and habitats nearby.
Pardosa tesquorum (Odenwall, 1901): 05, 09, 12, 13, 26, 28, 30, 31, 32, 34, 35, 36, 44, 45, 52, 58, 63; ILT: U, Ism, Mm, Rpb; MSLT: Dbs; MFLT: Sms, Mf, Lf, S.

***Pirata hygrophilus* Thorell, 1872** Map 147
[Holm, 1947: I.3-4, IX.1; Fuhn & Niculescu-Burlacu, 1971: f. 100a-e; Heimer & Nentwig, 1992: f. 894; Roberts, 1995: p.223]
Distribution: Euro-Mongolian boreo-nemoral range: from western Europe to Yenisei River (Eskov, 1988c), north to south Lapland (personal data), south to Romania (Fuhn & Niculescu-Burlacu, 1971) and Uzbekistan (Mikhailov, 1997).
Pirata hygrophilus Thorell, 1872: 01; ILT: Rpb.

***Pirata praedo* (Kulczyński, 1885)** Map 152
[Kulczyński, 1885: f. 34.a-c; Logunov, 1992b: f. 6a-ã; ?Tanaka, 1995: f. 1-4]
Distribution: Siberian boreal range: from Tuva to upper Kolyma and Kamchatka, south to Khabarovsk (Marusik et al., 1992a; Logunov, 1992b).
Comments. Judging from Tanaka's figures (Tanaka, 1999: figs 1-4; cf. Logunov, 1992: fig. 6), it may well be that *Pirata shibatai* from Hokkaido should be considered a junior synonym of *P. praedo*. Although this assumption has yet to be carefully studied (Tanaka, personal communication), it appears safe to treat *P. praedo* as presumably occurring in Hokkaido
Pirata praedo Kulczynski, 1885: 07, 57; ILT: Bf; MFLT: Sm. (Logunov 1992b).

***Tricca alpigena* (Doleshall, 1858)** Map 146
[Roberts, 1995: p.230; Heimer & Nentwig, 1992: f. 901; Dondale & Redner, 1990: f. 466-474]
Distribution: Circum-Holarctic hypoarcto-boreo-montane range: Middle and North Europe, throughout whole Siberia, southward to Altai (unpublished data) and north Mongolia. In Nearctic known from Alaska to Newfoundland and Greenland, south to Arizona, New Mexico & New Hampshire (Dondale & Redner, 1990).
Comments. Inhabits yernik (dwarf shrub thicket) bogs in taiga belt.
Tricca alpigena (Doleshall, 1852): 02, 08, 35, 40, 42, 56; GLT: Mwt, Sm; MFLT: Mf.

***Xerolycosa miniata* (C.L. Koch, 1834)** Map 141
[Holm, 1947: f. IV.34-35, X.26; Fuhn & Niculescu-Burlacu, 1971: f. 115.a-e; Roberts, 1995: p.223; Heimer & Nentwig, 1992: f. 908]
Distribution: Euro-Mongolian boreo-nemoral range: from Portugal (Cardoso, 1999) to Tuva, north to southern Finland (personal data) and north Ural (Esyunin & Efimik, 1996), and south to Azerbaijan (Mikhailov, 1997) and north-western Mongolia (personal data).
Comments. Many specimens were taken from pebbly river banks and nearby meadows.
Xerolycosa miniata (C.L .Koch, 1834): 09, 13, 17, 49, 51, 63; ILT: As, Mm, Rpb; MFLT: Sgg

***"Xerolycosa" mongolica* (Schenkel, 1963)** Map 152
[Schenkel, 1963: f. 204.a-c]
Distribution: Mongolian range: from Tuva on the west eastward to eastern Mongolia.
Comments. Exact type locality is unknown. Schenkel (1963) gave the label as "Urga-Tsitsikhar" (Urga= recent Ulan-Bator), so it could be either Mongolia or China. Recently, this species was transferred to *Xerolycosa* and synonymised with *X. nemoralis* (Westring) by Yu & Song (1988). We agree that this species belongs to the same subfamily as *Xerolycosa, namely* Evippinae Zyuzin, 1985, but not to *Arctosa* (as was originally assigned by Schenkel). At the same time it is certainly not conspecific with *X. nemoralis*, and not even congeneric, though very similar. As no known genus fits this species as well as *Xerolycosa* we retain the combination proposed by Yu & Song (1988). Because of the synonymisation of two species that occur in China, exact ranges of *X. nemoralis* and *"X." mongolica* within China are not clear.
Unlike true *Xerolycosa* species it is a burrowing form. It occurs only in dry steppes. Because of its burrowing ecology females are much more rare than males.
*"*Xerolycosa*" *mongolica* (Schenkel, 1963): 12, 53, 55; MSLT: Dbs, Dns, S.

***Xerolycosa nemoralis* (Westring, 1861)** Map 147
[Holm, 1947: f. IV.36-37, X.25; Fuhn & Niculescu-Burlacu, 1971: f. 116.a-e; Roberts, 1995: p.223; Heimer & Nentwig, 1992: f. 907]
Distribution: Trans-Palaearctic boreo-nemoral range: from Iberian Peninsula (Cardoso, 1999) to Kamchatka and North Kuril Islands, north to Lapland (Koponen, 1976) and cen-

tral Yakutia (Marusik et al., 1993), south to Azerbaijan (Mikhailov, 1997) and Honshu (Tsurusaki, personal communication).
Comments. Our few specimens have been collected in meadows in mountain tundra.
Xerolycosa nemoralis (Westring, 1861): 04; GLT: Sm.

MIMETIDAE

***"Ero"* sp. 1**
Comments. Only a few males and females of this species are known for us. Probably it is a new species. Occupies xeric habitats.
"Ero" sp. 1: 31, 32, 53; MSLT: Dns, S.

OXYOPIDAE

***Oxyopes licenti* Schenkel, 1953** Map 153
[Chikuni, 1989: p. 177, f. 2; Marusik et al., 1996: f. 89-92; Song et al., 1999: f. 234E-F, 236I-J]
Distribution: East Palaearctic (Siberio-Manchurian?) polyzonal range: from Altai in the west, throughout the whole of Siberia northward to Central Yakutia (Marusik et al, 1993) and eastward to upper Kolyma (Marusik et al., 1992a), and southward to Gansu, Shaanxi (Song et al., 1999), Korea (Paik, 1969) and Honshu (Tsurusaki, personal communication).
Comments. Occurs on dwarfish and large shrubs, chiefly on *Caragana* in forest clearings in forest belt and in steppe landscapes as well.
Oxyopes parvus Paik, 1969: 01, 09; 30, 31, 58; ILT: Mm; MFLT: Sgg, Sss, Sms.

PHILODROMIDAE

***Apollophanes macropalpus* (Paik, 1979)** Map 153
[Marusik, 1991: f. 2.2-4, 4.5; Logunov, 1996a: f. 5, 18-25]
Distribution: Siberio-Manchurian boreo-nemoral range: from Tuva to Maritime Province of Russia, north to lower Lena River, and south to Korea (Logunov, 1996a).
Comments. Most of our specimens have been collected by shaking and beating coniferous trees, chiefly pine, and by sweeping grass in clearings in mixed forests.
Apollophanes macropalpus (Paik, 1979): 23; MFLT: Lf, Sgg. (Logunov 1996a).

***Artanes marusiki* Logunov, 1997** Map 155
[Logunov, 1997b: f. 1-6]
Distribution: Mongolian range: from Khakassia and Tuva (Logunov, 1997) to Buryatia (personal data) and south to Arkhangai Aimak (Marusik & Logunov, 1998b).
Comments. Inhabits rocky cliffs. Most specimens were collected at night.
Artanes marusiki Logunov, 1997: 29, 30, 32, 44, 53; MFLT: Sss; MSLT: S. (Logunov 1997b).

***Philodromus alascensis* Keyserling, 1884** Map 154
[Kulczyński, 1908: f. 71-74, 80; Dondale & Redner, 1978: f. 188-198; Song et al., 1999: f. 271A, 272A]
Distribution: Siberio-American polyzonal range: from Xinjiang and Inner Mongolia (Song & Zhu, 1997) to Putorana Plateau (Eskov, 1988c), Lena River mouth and East Chukotka (Marusik et al., 1992a, 1993). In Nearctic distributed from tundra to desert zone.
Comments. Chinese populations as well as these from East Kazakhstan Area and SW Mongolia may belong to a different species. Inhabits various biotopes and strata.
Philodromus alascensis Keyserling, 1884: 17, 23, 30, 43, 44, 50, 56, 57, 63; ILT: Bf, U.

***Philodromus aureolus sibiricus* Kulczyński, 1908** Map 157
[Tullgren, 1944: f. 43b, XVI.220-224; Heimer & Nentwig, 1992: f. 12111; Roberts, 1995: p.170]
Distribution (of species): Trans-Palaearctic boreo-nemoral range: from western Europe to Kamchatka, north to Cispolar Ural (Esyunin & Efimik, 1996), south to Azerbaijan, Tajikistan (Mikhailov, 1997) and Sichuan (Song et al., 1999).
Comments. According to unpublished data of Logunov & Szita (personal data), the subspecies *P. a. sibiricus* seems to deserve a status of full species. The problem will be considered elsewhere. Map 157 presents a whole range of *P. aureolus* (*sensu lato*).
Philodromus aureolus (Clerck, 1758): 13, 17; ILT: Mm; MFLT: Sgg.

***Philodromus cespitum* (Walckenaer, 1802)** Map 154
[Dondale & Redner, 1978: f. 68, 102-105; Roberts, 1995: 170]
Distribution: Circum-Holarctic polyzonal range: all of Europe, eastward to Chukotka and Kamchatka, south to Honshu and China (Mikhailov, 1997; Tsurusaki, personal communication; Song & Zhu, 1997). In Nearctic known from Alaska to Newfoundland, south to California, Illinois and New Jersey (Dondale et al., 1997).
Comments. Recently it has been shown by Roberts (1995) and Segers (1987, 1990, 1992) that *aureolus* group is represented by several very similar species. Previously all of them were treated as synonyms of either *P. aureolus* or *P. cespitum*. According to new data (Logunov & Szita, personal data), all Siberian records of *P. aureolus* and *P. cespitum* require re-examination, as a part of them seems to be referred to *P. a. sibiricus*.
Philodromus cespitum (Walckenaer, 1802): 07, 08, 09, 10, 11, 14, 19, 23, 63; MFLT: Mf, Lf, Sgg, Sms, Sm.

***Philodromus corticinus* (C.L. Koch, 1837)** Map 158
[Thaler, 1981: f. 43-44; Heimer & Nentwig, 1992: f. 1219]
Distribution: Euro-Mongolian nemoral range: from western Europe (Thaler, 1981) to Tuva, north to middle Ural (Esyunin & Efimik, 1996).
Comments. Our few specimens were found in poplar forest in a kind of oasis in sandy desert.
Philodromus corticinus (C.L. Koch, 1837): 63; ILT: ?.

***Philodromus emarginatus* (Schrank, 1803)** Map 158
[Tullgren, 1944: f. 41b, XV. 209-211; Heimer & Nentwig, 1992: f. 1210; Roberts, 1995: p.173; Logunov, 1997b: f. 13-14]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Kurile Islands, north to south Lapland (personal data), Cispolar Ural (Esyunin & Efimik, 1996), north Yakutia (Marusik et al., 1993), south to North Africa, Tajikistan, Shanxi and Japan (Mikhailov, 1997; Song et al., 1999).
? *Philodromus emarginatus* (Schrank, 1803): 55; (?).

***Philodromus fallax* Sundevall, 1833** Map 157
[Tullgren, 1944: f. 42a, XV.212-213, XVI.214; Heimer & Nentwig, 1992: f. 1220; Roberts, 1995: p.172; Song et al., 1999: f. 271F, 272E]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe (Middle and North) (Prószyński & Staręga, 1971) to Chukotka (Marusik et al., 1992a), north to above the

Polar Circle and south to Azerbaijan, Uzbekistan (Mikhailov, 1997), and Inner Mongolia (Song et al., 1999). In Scandinavia it occurs as far north as 65°N, where it inhabits only coastal regions (SK, personal data).
Philodromus fallax Sundevall, 1833: 34, 49, 51, 57, 63; ILT: Bf, Rpb, As, Ism.

***Philodromus fuscomarginatus* (De Geer, 1778)** Map 159b
[Tullgren, 1944: f. 39a, XIV.200-202; Heimer & Nentwig, 1992: f. 1222]
Distribution: Trans-Palaearctic boreal range: from Europe to upper Kolyma (Marusik et al., 1992a), and south to north Mongolia and Tuva (Logunov et al., 1998).
Comments. Tree trunk dweller.
Philodromus fuscomarginatus (De Geer, 1778): 36; MFLT: ?.

***Philodromus histrio* (Latreille, 1819)** Map 159
[Tullgren, 1944: f. 42b, XVI.215-217; Heimer & Nentwig, 1992: f. 1209; Roberts, 1995: p.173; Song et al., 1999: f. 271G]
Distribution: Circum-Holarctic boreo-nemoral range: from western Europe (Prószyński & Staręga, 1971) to Kolyma River mouth (personal data) and south to Himalayas (Prószyński & Staręga, 1971) and Shanxi (Song et al., 1999). In Nearctic known from Yukon to Nova Scotia, south to Mexico (Dondale et al., 1997).
Comment. Dry meadow and steppe dweller.
Philodromus histrio (Latreille, 1819): 09, 11, 12, 17, 19, 32, 49, 53, 58; ILT: As; MFLT: Sss; MSLT: Dbs, Dns.

***Philodromus margaritatus* (Clerck, 1758)** Map 159b
[Tullgren, 1944: f. 41a, XV.206-208; Heimer & Nentwig, 1992: f. 1221; Roberts, 1995: p.175]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe (Prószyński & Staręga, 1971) to Kurile Islands (Marusik et al., 1992b), north to southern Finland (personal data) and North Ural (Esyunin & Efimik, 1996), and south to Mediterranean (Nikolić, 1981) and Japan (Tsurusaki, personal communication).
Philodromus margaritatus (Clerck, 1758): 05, 09, 30; MFLT: S.

***Philodromus poecilus* (Thorell, 1872)** Map 160
[Tullgren, 1944: f. 39b, XV.203-205; Heimer & Nentwig, 1992: f. 1218]
Distribution: Trans-Palaearctic (?) boreo-nemoral range: from France to Kamchatka (Prószyński & Staręga, 1971), north to north Ural, south to Uzbekistan and Japan (Esyunin & Efimik, 1996; Mikhailov, 1997).
Comments. Occurrence of this species in Kamchatka and Far East requires confirmation, because a sibling species, *P. utotchkini* Marusik, 1991, occurs there.
Philodromus poecilus (Thorell, 1872): 30, 49, 63; ILT: U; MFLT: Lf.

? ***Philodromus praedatus* O.P.-Cambridge, 1871**
[Heimer & Nentwig, 1992: f. 1212; Roberts, 1995: p.170]
Distribution: Euro-Baikalian (?) boreo-nemoral range: from Great Britain (Roberts, 1995) to Cisbaikalia (personal data). Exact range is obscure because this species is very similar to *P. cespitum* and *P. aureolus*, and has previously been confused with them.
? *Philodromus praedatus* O.P.-Cambridge, 1871: 32; ILT: Bf.

***Philodromus rufus* Walckenaer, 1826** Map 159

[Tullgren, 1944: f. 44, XVI.225, XVII.226-227; Heimer & Nentwig, 1992: f. 1214; Roberts, 1995: p.174]
Distribution: Circum-Holarctic (?) boreo-nemoral range: from western Europe to Sakhalin and Japan, in Asia north to middle Ural (Esyunin & Efimik, 1996) and south Siberia, south to Azerbaijan (Mikhailov, 1997), Yunnan and Fujian (Song et al., 1999). In Nearctic this species is represented by three forms (treated as subspecies) occurring from Alaska to Newfoundland, and south to Mexico and Lake Superior (Dondale et al., 1997). Because the Nearctic forms are overlapping is some parts of their range, and therefore sympatric, they appear to represent independent species.
Philodromus rufus Walckenaer, 1826: 01, 09, 14, 17, 28, 30, 32, 34, 53, 57, 58, 63; ILT: Rpb, Bf, As, U, Ism; MSLT: Dbs, Dns.

Philodromus* sp. 1 (*cf. alascensis)
Comments. Status of this species remains unclear.
Philodromus sp. 1 (*cf. alascensis*): 32, 63; ILT: Mm.

***Philodromus* sp. 2 (*cf. histrio*)**
Comments. Status of this species remains unclear. It is somewhat possible that our specimens are conspecific with highly polymorphic *P. histrio*.
Philodromus sp. 2 (*cf. histrio*): 30, 53; MSLT: Dbs; MFLT: Sss.

***Philodromus* sp. 3 (*cf. margaritatus*)**
Comments. Status of this species remains unclear.
Philodromus sp. 3 (*cf. margaritatus*): 63; ILT: U.

***Thanatus arcticus* Thorell, 1872** Map 159
[Dondale & Redner, 1978: f. 394-403; Marusik, 1991: f. 1.5, 4.3-4; Logunov, 1996a: f. 2, 4, 7-9, 26-57]
Distribution: Circum-Holarctic polyzonal (?) range: from north Fennoscandia to Polar Ural, via the whole of Siberia to Chukotka Peninsula, and south to Tuva and Mongolia (Esyunin & Efimik, 1996; Marusik et al., 1992a; Logunov et al., 1998; Marusik & Logunov, 1998b). In Nearctic distributed NW part and in W Greenland (Dondale et al., 1997).
Comments. Inhabits dry steppe with *Nanophyton erinaceus* and *Artemisia-Stipa* steppes, stony mountain meadows, sloping stony steppes and wet meadows. Wide geographical range and occurrence both in tundra and steppe biotopes indicates that it may be a complex species.
Thanatus arcticus Thorell, 1872: 10, 11, 12, 24, 45, 47, 50, 53, 55, 61; GLT: Mwt; MFLT: Sss, Sgg; MSLT: Dbs, Dns, Cxs. (Logunov 1996a).

***Thanatus arenarius* L. Koch, 1872** Map 158
[Tullgren, 1944: f. 46b, XVII.234-235, XVIII.236; Heimer & Nentwig, 1992: f. 1228; Roberts, 1995: p.177; Logunov, 1996a: f. 6, 86-87, 125-135]
Distribution: Euro-Mongolian nemoral range: from western Europe Prószyński & Staręga, 1971 to Tuva (Logunov, 1996a).
Comments. Records from Amur Area and Himalayas (Prószyński & Staręga, 1971; Logunov, 1996a) probably refer to another species.
Occurs in different steppe habitats such as sloping shrub-stony steppes, meadow steppes, salt marshes.

Thanatus arenarius L. Koch in Thorell, 1872: 09; MFLT: Sss, Sms. (Logunov 1996a).

***Thanatus bungei* (Kulczyński, 1908)** Map 161
[Dondale & Redner, 1978: f. 408-411; Logunov, 1996a: f. 103-104,106-116]
Distribution: Siberio-W Nearctic boreo-hypoarctic range: from Middle Ural to Chukotka, south to Tuva and Mongolia (Logunov, 1996; Marusik et al., 1992a). In Nearctic known from Alaska to Colorado (Dondale et al., 1997).
Comments. Scree and mountain tundra dweller.
Thanatus bungei (Kulczynski, 1908): 05; GLT: Mwt; MFLT: S. (Logunov 1996a).

***Thanatus coloradensis* Keyserling, 1880**
[Kulczyński, 1908: f . 69; Dondale & Redner, 1978: f. 358-363; Logunov, 1996a: f. 62-72, 84-85]
Distribution: Holarctic disjunctive boreo-montano-alpine range: in Europe known from Alps, in Siberia from East-Kazakhstan Area to Chukotka (Logunov, 1996a). In Nearctic known Alaska to Manitoba, south to California and Oklahoma (Dondale et al., 1997).
Comments. Inhabits meadow steppes and sloping shrub steppes.
Thanatus coloradensis Keyserling, 1880: 21, 26, 27, 29, 31, 40, 44, 45, 52, 56; GLT: Mwt; MFLT: Sms, S. (Logunov 1996a).

***Thanatus coreanus* Paik, 1979** Map 158
[Logunov, 1996a: f. 137-142, 146-152, 158-159; Song et al., 1999: f. 271R, 272M]
Distribution: Mongolo-Manchurian range: from Khakassia to Maritime Province (Logunov, 1996a), south to Hebei and Korea (Song et al., 1999).
Comments. Inhabits various kinds of steppes, from sloping stony steppes to meadow steppes.
Thanatus coreanus Paik, 1979: 21, 30, 35, 40, 49, 50, 53; MFLT: Sss, Sms; MSLT: Cxs, Dbs. (Logunov 1996a).

***Thanatus stepposus* Logunov, 1996** Map 52-no
[Logunov, 1996a: f. 160-164, 167-172, 176-177]
Distribution: Tuvan range: known only from SE Tuva (Logunov, 1996a).
Comments. Inhabits dry stony steppes with *Nanophyton erinaceus* and sloping stony steppes.
Thanatus stepposus Logunov, 1996: 23, 32, 33, 34; MSLT: Dns, S. (Logunov 1996a).

***Thanatus striatus* C.L. Koch, 1845** Map 161
[Tullgren, 1944: f. 45a, Dondale & Redner, 1978: f. 353-357; Logunov, 1996a: f. 1, 3, 215, 227-233]
Distribution: Circum-Holarctic polyzonal range: Central and North Europe, Tien-Shang, the whole of Siberia from North Ural to Chukotka, south to Mongolia (Logunov, 1996a). In Nearctic known from Alaska to Labrador, south to New England and California (Dondale & Redner, 1978).
Comments. Inhabits various herbaceous biotopes, from steppe to wet meadows and even mountain tundra.
Thanatus striatus C.L. Koch, 1845: 30, 34; ILT: Bf. (Logunov 1996a).

***Thanatus tuvinensis* Logunov, 1996** Map 155
[Logunov, 1996: f. 182-183, 234-241]

Distribution: Central Asian-Siberian boreo-montane range: from north Tien-Shang and Tuva to upper Kolyma (Logunov, 1996a).
Comments. Judging from the figures in Song & Zhu (1997), one could assume that species might be a junior synonym of *T. neimongol* Urita et Song, 1987, known from Inner Mongolia (Song et al., 1999). Inhabits sloping stony steppe, mountain stony steppe, *Artemisia-Stipa-Caragana* shrub steppe and dry stony steppe with *Nanophyton erinaceus*.
Thanatus tuvinensis Logunov, 1996: 23, 30, 32, 34, 38, 44, 49, 50, 53; MSLT: Dns, Dbs. (Logunov 1996a).

***Thanatus ubsunurensis* Logunov, 1996** Map 156
[Logunov, 1996a: f. 95-102, 180-181]
Distribution: Mongolian range: known from Ubsu-Nur Lake (Logunov, 1996a), Middle and South Gobi and Bayankhongor Aimaks of Mongolia (Marusik & Logunov, 1998b).
Comments. Inhabits dry stony steppes with *Nanophyton erinaceus*.
Thanatus ubsunurensis Logunov, 1996: 32, 34; MSLT: Dns. (Logunov 1996a).

***Thanatus* sp. 1**
Comments. A single female represents this species in our collection. It belongs to an undescribed species.
Thanatus sp. 1: 63; MSLT: Sds.

***Tibellus asiaticus* Kulczyński, 1908** Map 162
[Dondale & Redner, 1978: f. 333-337; Efimik, 1999: f. 12-13, 24, 31, 39, 47, 55-60]
Distribution: Siberio-Nearctic boreal range: from Tuva and Mongolia to NE Yakutia and Kamchatka (Marusik, 1991d; Marusik et al., 1992a, 1993; Marusik & Logunov, 1998b). In Nearctic known from Alaska to Ontario, and south to Utah (Dondale et al., 1997).
New localities. 12, 33 (Efimik, 1999).
Tibellus asiaticus Kulczynski, 1908: 08, 17, 28, 32, 34, 51; ILT: As, Mm, Ism; MFLT: Sgg.

***Tibellus aspersus* Danilov, 1991** Map 156
[Danilov, 1991: f. 1-2; Efimik, 1999: 7, 14, 23, 32, 40, 48, 63, 61-62]
Distribution: Mongolian range: from Khakassia to Chita Area and Buryatia (Efimik, 1999), south to Middle Gobi (personal data). This species probably occurs in China too, and at least some records of *T. tenellus* (L. Koch, 1876) from there refer to this species.
Tibellus aspersus Danilov, 1991: 08, 12, 14, 29, 34, 51, 53, 63; ILT: As, Ism; MFLT: Sgg; MSLT: Dbs.

***Tibellus maritimus* (Menge, 1875)** Map 162
[Tullgren, 1944: f. 47b, XVIII.242-244; Dondale & Redner, 1978: f. 324-327; Roberts, 1995: p.178; Song et al., 1999: f. 273D,N; Efimik, 1999: f. 19, 20, 27-30, 34, 45, 51, 71-76]
Distribution: Circum-Holarctic polyzonal range: almost the whole of Eurasia north of 40°N and south of 70°N. In Nearctic known from Alaska to Newfoundland, south to Utah and New England (Dondale et al., 1997).
Tibellus maritimus (Menge, 1875): 07, 17, 23, 34, 57, 58, 63; ILT: Bf, As, Ism; MFLT: Sgg, Sm.

***Tibellus oblongus* (Walckenaer, 1802)** Map 163
[Tullgren, 1944: f. 47a, XVIII.238-241; Roberts, 1995: p.178; Song et al., 1999: f. 273E,O; Efimik, 1999: f. 18, 26, 38, 42, 50, 77-83]
Distribution: Circum-Holarctic boreo-nemoral zone: almost the same range as in *T.*

maritimus, from western Europe to Kamchatka (Efimik, 1999), north to Lapland (personal data), and Central Yakutia (Marusik et al., 1993), south to Sichuan (Song et al., 1999). In Nearctic known from Alaska to Nova Scotia, south to Mexico (Dondale et al., 1997).
Tibellus oblongus (Walckenaer, 1802): 13; MFLT: Sgg.

PISAURIDAE

***Pisaura ancora* Paik, 1969** Map 157
[Logunov, 1990: f. 2a-, 3.I]
Distribution: Mongolo-Manchurian nemoral range: from Tuva to Khabarovsk and Russian Far East (Logunov, 1990), south to Sichuan and Zhejiang (Song et al., 1999).
Pisaura ancora Paik, 1969: 19, 63; ILT: U. (Logunov 1990).

SALTICIDAE

***Asianellus festivus* (C.L. Koch, 1846)** Map 162
[Logunov & Hęciak, 1996: f. 1-5, 8, 10, 17-19, 23-28, 35, 39]
Distribution: Trans-Palaearctic boreo-nemoral range: from France eastward to Kurile Islands (personal data), north to Central Yakutia (Marusik et al., 1993), and south to Sichuan and Anhui (Song et al., 1999).
Asianellus festivus (C.L. Koch, 1846): 08, 09, 11, 12, 14, 17, 18, 19, 20, 23, 27, 29, 30, 34, 35, 40, 44, 45, 49, 50, 51, 53, 58, 63; ILT: Rpb; MFLT: Sss, S; MSLT: Dns, S. (Logunov 1992c, Logunov & Hęciak 1996).

***Asianellus ontchalaan* Logunov & Hęciak , 1996** Map 166
[Logunov & Hęciak , 1996: f. 9, 11, 14-16, 20-22, 29-30, 38, 44-48]
Distribution: Mongolian range: from east Kazakhstan (Logunov & Hęciak , 1996) south to Central Aimak (Marusik & Logunov, 1998b). It may also occur in Gansu. Figures given by Chinese authors fit this species better than *A. potanini* (cf. Logunov, 1992).
Asianellus ontchalaan Logunov & Hęciak , 1996: 12, 14, 15, 18, 19, 33, 34, 37, 53, 55, 63; MSLT: Dns, Dbs, Sds. (Logunov 1992c: sub. *Aelurillus* cf. *potanini*; Logunov & Hęciak 1996).

***"Bianor" aemulus* (Gertsch, 1934)** Map 163
[Logunov & Marusik, 1991: f. 1a-, 2-, □, 4]
Distribution: Siberio-Nearctic boreal range: Middle Ural to upper Kolyma, north to lower Lena River (67°N), and south to Tuva and north Mongolia (Logunov & Marusik, 1991; Marusik et al., 1992a, 1993; Logunov et al., 1998; Marusik & Logunov, 1998b). In Nearctic known to be distributed from Alberta to New Brunswick, south to Ontario and Wyoming (Maddison, 1978; Richman & Cutler, 1978). Siberian population may belong to a separate form (species or subspecies).
Bianor aemulus (Gertsch, 1934): 08, 11; MFLT: Mf. (Logunov & Marusik 1991, Logunov 1992c).

***"Bianor" inexploratus* Logunov, 1991** Map 163
[Logunov, 1991: f. 3.1-3]
Distribution: Caucaso-Manchurian nemoral range: from Azerbaijan (Mikhailov, 1997) southeast to Hunan (Song et al., 1999) and north to Tuva.
Bianor inexploratus Logunov, 1991: 17; ILT: As. (Logunov 1991).

***"Bianor" stepposus* Logunov, 1991** Map 166

[Logunov, 1991: f. 2.1-7]
Distribution: Central Asian - Yakutian steppe-montane range: from Kyrgyzstan to middle Lena River (Logunov, 1992c).
Bianor stepposus Logunov, 1991: 17, 34, 35, 37, 53, 58, 63; ILT: As, U, Ism; MFLT: Sss; MSLT: Dbs, Sds. (Logunov 1991, 1992c).

***Chalcoscirtus alpicola* (L. Koch, 1876)** Map 164
[Thaler, 1981: f. 59, 67, 71; Cutler, 1990: f. 1-3, 5-12; Marusik, 1991a: 1.6-9; Heimer & Nentwig, 1992: f. 1323; Logunov & Marusik, 1999]
Distribution: Circum-Holarctic hypoarcto-boreo-montane disjunctive range: from Alps (isolated population), via Polar and South Ural, to Chukotka Peninsula and south to Tuva and Central Mongolia (Logunov & Marusik, 1999). In Nearctic known from Alaska to New Hampshire, south to Utah and Colorado (Dondale et al., 1997).
Chalcoscirtus alpicola (L. Koch, 1876): 02, 27; GLT: Mwt; MFLT: Sms.

***Chalcoscirtus glacialis* Caporiacco, 1935** Map 165
[Marusik, 1991a: 2.3-5, 3.3-4]
Distribution: Himalaya-Siberio-NW Nearctic polyzonal range: known from Kashmir, Tuva, Mongolia and from upper Yana River to E Chukotka and southern Yukon Territory (Marusik, 1991a; Logunov & Marusik, 1999).
Chalcoscirtus glacialis Caporiacco, 1935: 14, 19, 32, 36, 45, 50, 53, 55, 58, 60, 63; ILT: Rpb; MSLT: Dbs, Dns, Cxs, S. (Logunov 1992c).

***Chalcoscirtus koponeni* Logunov & Marusik, 1999** Map /2
[Logunov & Marusik, 1999: f. 83-85]
Distribution: Tuvan alpine range: found in single locality.
Chalcoscirtus sp. 1 (*cf. alpicola*): 26; GLT: Mwt.
Chalcoscirtus nigritus (Thorell, 1875) Map 164b
[Logunov & Marusik, 1999: f. 44-48, 53-54]
Distribution: Euro-Tuvan steppe range: from Germany along south Ukraine to south Kazakhstan, eastward to Tuva, and northward to Novosibirsk (Logunov & Marusik, 1999).
Chalcoscirtus nigritus (Thorell, 1875): 14; MSLT: Dbs.

***Dendryphantes czekanowskii* Prószyński, 1979** Map 1205]
[Prószyński, 1979: f. 34-35; Marusik & Cutler, 19`89: f. 1-3]
Distribution: Trans-Siberian hypoarcto-montane range: from Polar Ural (Esyunin & Efimik, 1996) to eastern Chukotka (Marusik et al., 1992a), north to Kolyma River mouth (personal data), and south to Tuva (Logunov et al., 1998) and southern Transbaikalia (Danilov & Logunov, 1994).
Dendryphantes czekanowskii Prószynski, 1979: 35, 56; GLT: Mwt.

***Dendryphantes fusconotatus* (Grube, 1861)** Map 168
[Prószyński, 1979: f. 37-63; Logunov & Marusik, 1994a: f. 2f-i]
Distribution: Siberian boreo-nemoral range: from Evenkia and Tuva to upper Kolyma, south to Inner Mongolia and north Sakhalin (Marusik et al., 1992a,b; Esyunin & Efimik, 1996).
Dendryphantes fusconotatus (Grube, 1861): 07, 09, 19, 20, 23, 27, 29a, 32, 34, 35, 36, 39, 46, 49, 51, 58, 63; ILT: Ism; MFLT: Sms, Sss. (Logunov 1992c).

***Dendryphantes hastatus* (Clerck, 1757)** Map 164b
[Tullgren, 1944: f. 26b, V.87-88; Heimer & Nentwig, 1992: f. 1326]
Distribution: Euro-Baikalian boreo-nemoral range: from Central Europe to north Fennoscandia, eastward to Transbaikalia (Logunov, 1996) and southward to Shanxi (Song et al., 1999). The latter record requires verification.
Dendryphantes hastatus (Clerck, 1757): 08; MFLT: Mf. (Logunov 1992c).

***Dendryphantes rudis* (Sundevall, 1832)** Map 973]-61
[Tullgren, 1944: f. 26a, V.84-86; Heimer & Nentwig, 1992: f. 1327; Roberts, 1995: p.191]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to upper Kolyma. south to Azerbaijan, Mongolia and northern Sakhalin (Marusik et al., 1992a,b; Esyunin & Efimik, 1996).
Dendryphantes rudis (Sundevall, 1832): Yirban; MFLT: Mf. (Logunov 1992c).

***Dendryphantes tuvinensis* Logunov, 1991** Map 168
[Logunov, 1991: f. 4.1-6]
Distribution: Mongolian range: from East-Kazakhstan Area east to Chita Area and south to Middle Gobi (Logunov, 1992c; Marusik & Logunov, 1998b)
Dendryphantes tuvinensis Logunov, 1991: 12, 17, 29a, 30, 31, 37, 49, 53, 58; ILT: Ism; MSLT: Dbs, Dns, Sds. (Logunov 1991, 1992c).

***Euophrys flavoatra* (Grube, 1861)** Map 167
[Prószyński, 1971b: f. 10-12; Logunov et al., 1993: f. 5b, 6e, 7e, 8e-e, 9a-c]
Distribution: Siberian boreo-hypoarctic range: from Polar Ural to upper Kolyma, south to Altai, Tuva and lower Amur River (Logunov et al., 1993).
Euophrys flavoatra (Grube, 1861): 02, 08, 11, 27, 35, 56; GLT: Mst, Mwt; MFLT: Mf. (Logunov 1992c, Logunov *et al.* 1993).

***Euophrys proszynskii* Logunov et al., 1993** Map 167
[Logunov et al., 1993: f. 5.c, 12a-e, 13a-c]
Distribution: Siberian boreal range: from Tuva to Kolyma River mouth (unpublished), south to Central Mongolia (Logunov et al., 1993; Marusik & Logunov, 1998b).
Euophrys proszynskii Logunov, Cutler & Marusik, 1993: 09, 26, 30, 43; GLT: Mst; MFLT: S, Sss. (Logunov 1992c: sub. *Euophrys sp*.; Logunov *et al.* 1993).

***Evarcha arcuata* (Clerck, 1758)** Map 165
[Tullgren, 1944: f. VI.113-114; Heimer & Nentwig, 1992: f. 1341; Roberts, 1995: p.203; Rakov, 1997: f. 1-4]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to upper Kolyma (Marusik et al., 1992a), to Caucasus, Kyrgyzstan, China (Xinjiang, Inner Mongolia and Jilin) and Kunashir Isl. (Mikhailov, 1997; Marusik et al., 1992b).
Evarcha arcuata (Clerck, 1758): 09, 14, 19, 58, 63; ILT: U, Mm; MFLT: Sms. (Logunov 1992c).

***Evarcha falcata* (Clerck, 1758)** map 164b
[Tullgren, 1944: f. VI.111-112; Heimer & Nentwig, 1992: f. 1341; Roberts, 1995: p.202; Marusik & Logunov, 1998a: f. 4-5, 12-13, 15-17; Song et al., 1999: f. 293O-P]
Distribution: Euro-Baikalian boreo-nemoral range: most of Europe (except for Iberian Peninsula, south Italy, Corsica, Greece, Ireland and Iceland to Cisbaikalia, north up to 69°N in Fennoscandia, south to 41°N in Mediterranean, and 50°N in Russia, Kazakhstan and Xinjiang (Marusik & Logunov, 1998a). Records of this species from Mongolia and Central and Eastern China refer to *E. proszynskii*.
Evarcha falcata (Clerck, 1758): 01, 05; MFLT: Mf. (Marusik & Logunov 1998a).

***Evarcha michailovi* Logunov, 1992** Map 215
[Logunov, 1992c: f. 2a-b, 3a-b]
Distribution: Euro-Mongolian boreo-nemoral range: from Spain to east Mongolia, north to Perm Area and south to Ulan Bator (Logunov, 1992c; Marusik & Logunov, 1998b, and personal data).
Evarcha michailovi Logunov, 1992: 07, 11, Sayano-Shushensky Reservation; MFLT: Sms, Sgg. (Logunov 1992c).

***Evarcha proszynskii* Marusik & Logunov, 1998** map 164
[Marusik & Logunov, 1998a: f. 1-2, 6-8, 14, 19-20; Song et al., 1999: f. 295D-E, M-N]
Distribution: Siberio-West Nearctic boreo-nemoral range: from Taldy-Kurgan Area in Kazakhstan and Tuva (an isolated populations), and south Transbaikalia north to Vilyuy River, east to Kamchatka and south to Bayankhongor Aimak, Jilin and Honshu (Marusik & Logunov, 1998a,b). In Nearctic found from Alaska to western Ontario and south to California and New Mexico (Marusik & Logunov, 1998a).
Evarcha proszynskii Marusik & Logunov, 1998: 07, 08, 23; MFLT: Mf. (Logunov 1992c: sub. *E. falcata*; Marusik & Logunov 1998a).

***"Harmochirus" latens* (Logunov, 1991)** Map 164b
[Logunov, 1991: f. 3.5-6; Logunov & Wesołowska, 1992: f. 2-3]
Distribution: Mongolo-Manchurian steppe range: from Tuva and Khakassia along south Siberia to Khabarovsk Province ([Logunov, 1991; Logunov & Wesołowska, 1992]
Harmochirus latens (Logunov, 1991): 17; ILT: As. (Logunov 1991).

***Heliophanus auratus* C.L. Koch, 1835** map 165
[Tullgren, 1944: f. VI.103-104; Heimer & Nentwig, 1992: f. 1351; Roberts, 1995: p.188; Rakov & Logunov, 1997: f. 1-9; Song et al., 1999: f. 299H]
Distribution: Euro-Baikalian boreo-nemoral range: from Iberian Peninsula to Vilyuy River upper reaches, and inner Mongolia, north to middle Finland, and south to Cyprus, Azerbaijan , Tajikistan and Inner Mongolia (Wesołowska, 1986; Rakov & Logunov, 1997; Song et al., 1999).
Heliophanus auratus C.L. Koch, 1835: 14, 17, 58, 63; ILT: Ism, Mm; MFLT: Sm. (Logunov 1992c).

***Heliophanus baicalensis* Kulczyński, 1895** Map 169
[Prószyński, 1979: f. 98-100; Wesołowska, 1986: f. 536-537; Marusik & Cutler, 1989: f. 4-7; Song et al., 1999: f. 299O, 300A]
Distribution: Siberian boreal range: from Tuva to upper Kolyma, south to Shanxi (Wesołowska, 1986; Logunov, 1997; Song et al., 1999).
Heliophanus baicalensis Kulczynski, 1895: 11, 23, 35, 58; ILT: U; MFLT: Sms, Mf, Sgg. (Logunov 1992c).

***Heliophanus camtschadalicus* Kulczyński, 1885** Map 164
[Prószyński, 1979: f. 101-102; Wesołowska, 1986: f. 534-535; Wesołowska & Marusik, 1990: f. 1-10]
Distribution: Siberian boreal range: from Fennoscandia (sub *H. dampfi* Schenkel, 1963) throughout Ural (sub *H. dampfi*, Esyunin & Efimik, 1996) to upper Kolyma and Kam-

chatka, and south to Tuva, Mongolia and NE China (Wesołowska & Marusik, 1990; Logunov, 1997). Juvenile specimens collected in the Chaun Bay (Chukotka) (Marusik et al., 1992a) may belong to this species.
Heliophanus camtschadalicus Kulczynski, 1895: 08, 40; ILT: U; MFLT: Sms. (Logunov 1992c).

***Heliophanus dubius* C.L. Koch, 1835** Map 170
[Tullgren, 1944: f. 27d, 28d, V.99-100; Wesołowska, 1986: f. 622-628; Heimer & Nentwig, 1992: f. 1352; Rakov & Logunov, 1997: f. 43-50]
Distribution: Trans-Palaearctic boreo-nemoral range: from Spain to upper Kolyma, south to Azerbaijan, northern Tien-Shang (isolated population), Jilin and Sakhalin (Wesołowska, 1986; Marusik et al., 1992a,b, 1993; Peng et al., 1993; Mikhailov, 1997).
Heliophanus dubius C.L. Koch, 1835: 63; ILT: U.

***Heliophanus flavipes* Hahn, 1832** Map 172
[Heimer & Nentwig, 1992: f. 1348; Rakov & Logunov, 1997: f. 67-75; Song et al., 1999: 300M-N]
Distribution: Euro-Baikalian boreo-nemoral range: almost the same range as in *H. auratus,* from Iberian Peninsula to Baikal, north to middle Finland, and south to North Africa, northern Iran, Xinjiang and Central Mongolia (Wesołowska, 1986; Rakov & Logunov, 1997; Marusik & Logunov, 1998b; Song et al., 1999).
Heliophanus flavipes Hahn, 1832: 07, 10, 11, 23, 27, 31; MFLT: Mf, Lf, Sgg, Sms. (Logunov 1992c).

***Heliophanus lineiventris* Simon, 1868** Map 172
[Heimer & Nentwig, 1992: f. 1349; Rakov & Logunov, 1997: f. 28, 57-58, 97-100]
Distribution: Trans-Palaearctic nemoral range: from Iberian Peninsula as a rather narrow belt eastward to Kurile Islands, north to south-central Yakutia, and south to Korea (Wesołowska, 1986; Rakov & Logunov, 1997; Song et al., 1999).
Heliophanus lineiventris Simon, 1868: 08, 17, 19, 30, 63; ILT: As; MFLT: Sss; MSLT: Dbs, Sds. (Logunov 1992c).

***Heliophanus patagiatus* Thorell, 1875** Map 170
[Wesołowska, 1986: f. 752-755; Rakov & Logunov, 1997: f. 115-122]
Distribution: Trans-Palaearctic boreo-nemoral range: from France to upper Kolyma, south to Azerbaijan, Tajikistan and Central Mongolia, north to lower Lena River (67°N) (Wesołowska, 1986; Marusik et al., 1992a, 1993; Marusik & Logunov, 1998b).
Heliophanus patagiatus Thorell, 1875: 09, 14, 17, 19, 20, 30, 35, 37, 49, 50, 55, 58, 63; ILT: Rpb; MFLT: S. (Logunov 1992c).

***Marpissa radiata* (Grube, 1859)** Map 177
[Tullgren, 1944: f. V.80-83; Heimer & Nentwig, 1992: f. 1360; Roberts, 1995: p.189]
Distribution: Euro-Baikalian boreo-nemoral range: from France to Transbaikalia, north to Fennoscandia, south to Kazakhstan (Logunov, 1992c; Danilov & Logunov, 1993).
Marpissa radiata (Grube, 1859): 23; MFLT: Sm. (Logunov 1992c).

***Neon rayi* (Simon, 1875)** Map 172
[Heimer & Nentwig, 1992: f. 1368]
Distribution: Euro-Mongolian nemoral range: from Mediterranean to south Slovakia (Gajdoš et al., 1999) and via Caucasus (Logunov, 1998a) eastward to Tuva (easternmost locality).

Comments. A single specimen was collected in a poplar-birch stand on the edge of a bog in sandy desert.
Neon rayi (Simon, 1875): 63; ILT: U.

***Neon reticulatus* (Blackwall, 1853)** Map 171
[Tullgren, 1944: f. III.60-62, IV.63; Heimer & Nentwig, 1992: f. 1365; Roberts, 1995: p.194]
Distribution: Palaearctic-West Nearctic boreo-nemoral range: from Açores to Kurile Islands, north to Fennoscandia, and south to Zhejiang (Prószyński & Staręga, 1971; Marusik et al., 1992b; Song et al., 1999). In Nearctic known from Alaska and Yukon, south to Oregon (Dondale et al., 1997).
Comments. In two localities specimens have been collected in deciduous forest litter.
Neon reticulatus (Blackwall, 1853): 14, 63; ILT: U.

***Pellenes gobiensis* Schenkel, 1936** Map 169
[Logunov, 1992d: f. 5a-h]
Distribution: Siberian boreo-nemoral (steppe) range: from eastern Altai to upper Kolyma, south to Inner Mongolia (Logunov, 1997; Logunov et al., 1999).
Pellenes gobiensis Schenkel, 1936: 12, 55; MSLT: Dns, Dbs. (Logunov 1992c).

***Pellenes ignifrons* (Grube, 1861)** Map 173
[Prószyński, 1971b: f. 10-12; Prószyński, 1979: f. 228; Logunov et al., 1999: f. 18-19, 23]
Distribution: Siberian boreal range: from Evenkia (Eskov, 1988c) to Kolyma River mouth, south to SE Altai and central Mongolia (Logunov et al., 1999; $$).
Pellenes ignifrons (Grube, 1861): 08, 26, 36; MFLT: Sgg, Sms. (Logunov 1992c).

***Pellenes lapponicus* (Sundevall, 1832)** Map 177
[Tullgren, 1944: f. VI.109-110; Thaler, 1981: f. 63-64, 73; Heimer & Nentwig, 1992: f. 1369; Danilov & Logunov, 1993: f. 3a-d; Logunov & Marusik, 2000: f. 22-23]
Distribution: Trans-Palaearctic- West Nearctic boreo-alpine disjunctive range: from Alps, north to Fennoscandia, and eastward to Cisbaikalia (Danilov & Logunov, 1993). In Nearctic known from Alberta and USA (Danilov & Logunov, 1993).
Pellenes lapponicus (Sundevall, 1832): 26, 56; GLT: Mwt. (Danilov & Logunov 1993).

***Pellenes limbatus* Kulczyński, 1895** Map 173
[Logunov, 1992d: f. 6a-h; Logunov et al., 1999: f. 10, 15, 17]
Distribution: East Palaearctic boreo-montane range: from North Tien-Shang to upper Kolyma and Indigirka, and south to Central Mongolia (Logunov et al., 1999). Almost the same range as in *P. sibiricus.*
Pellenes limbatus (Kulczynski, 1895): 41, 44, 45, 50, 55, 59, 61; ILT: Rpb; MSLT: Cxs, S. (Logunov 1992c).

***Pellenes pulcher* Logunov, 1995** Map 174
[Logunov, 1995a: f. 5-7; Logunov et al., 1999: f. 50-52]
Distribution: West Mongolian (?) range: from Pavlodar Area, Kazakhstan eastward to South Gobi, and north to Ubsu-Nur Lake (Logunov et al., 1999).
Pellenes pulcher Logunov, 1995: 34; MSLT: Dns. (Logunov 1995).

***Pellenes sibiricus* Logunov & Marusik, 1994** Map 174

[Logunov & Marusik, 1994a: f. 6a-c, 7a-b, 8a-d; Logunov et al., 1999: 1-4, 20-22]
Distribution: East Palaearctic boreo-montane range: from North Tien-Shang, to upper Kolyma and Kamchatka, south to Mongolia (Logunov et al., 1999). Almost the same range as in *P. limbatus*.
Pellenes sibiricus Logunov & Marusik, 1994: 08, 09, 11, 14, 17, 20, 23, 31, 32, 34, 57, 63; ILT: Ism; MFLT: Sms, Sgg. (Logunov 1992c: sub. *P. cf. tripunctatus*; Logunov & Marusik 1994b).

***Philaeus chrysops* (Poda, 1761)** Map 177
[Heimer & Nentwig, 1992: f. 1372; Roberts, 1995: p.202]
Distribution: Trans-Palaearctic nemoral range: from western Europe to the Russian Far East, north to about 53°N, and south to Shanxi (Logunov, 1992c; Song et al., 1999).
Philaeus chrysops (Poda, 1761): 08, 09, 14, 18, 23; ILT: Rpb; MFLT: Sss, S. (Logunov 1992c).

? ***Phlegra fuscipes* Kulczyński, 1891** Map 160
[Heimer & Nentwig, 1992: f. 1375; Logunov, 1996b: f. 27-48]
Distribution: Euro-Yakutian boreo-nemoral range: from Europe northeast to south Yakutia, and southward to Inner Mongolia and Jilin (Logunov, 1996b; Song et al., 1999).
Comments. It is very likely that all Siberian records may belong to a new species, while *P. fuscipes* itself seems to be a junior synonym of *P. cinereofasciata* Simon, 1868. The problem requires attention in the future.
Phlegra fuscipes Kulczynski in Chyzer & Kulczynski, 1891: 12, 17, 18, 19, 27, 29; ILT: As; MFLT: Sss; MSLT: Dns. (Logunov 1992c; 1996b).

***Phlegra profuga* Logunov, 1996** Map 175
[Logunov, 1996b: f. 49-56]
Distribution: West Mongolian range: from South Ural to Tuva and south to South Gobi (Logunov, 1996b; Marusik & Logunov, 1998b).
Phlegra profuga Logunov, 1996: 12, 16, 32; MSLT: Dns. (Logunov 1992c: sub. *P. cf. sogdiana*; Logunov 1996b).

***Pseudeuophrys erratica* (Walckenaer, 1825)** Map 178
[Heimer & Nentwig, 1992: f. 1331; Logunov et al., 1993: f. 2; Roberts, 1995: p.197; Logunov, 1998b: f. 1-7, 9, 12, 17-20, 24-26, 33, 34]
Distribution: Euro-Baikalian boreo-nemoral range: from western Europe to Baikal, south to Azerbaijan (Logunov et al., 1993; Mikhailov, 1997). In Nearctic found in New Jersey (Logunov et al., 1993; Logunov, 1998b).
Pseudeuophrys erratica (Walckenaer, 1825): 01, 07; MFLT: Mf. (Logunov 1992c: sub. *Euophrys e.*; Logunov *et al.* 1993: sub. *Euophrys e.*).

***Salticus cingulatus* (Panzer, 1797)** Map 178
[Tullgren, 1944: f. I.8-12; Heimer & Nentwig, 1992: f. 1378; Roberts, 1995: p.185]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Khabarovsk, north to north Ural (ca 60°N, Efimik & Esyunin, 1996) and Tomsk (Logunov & Marusik, 2000).
Salticus cingulatus (Panzer, 1797): 12, 17, 49, 58, 63; ILT: U. (Logunov 1992c).

***Sitticus albolineatus* (Kulczyński, 1895)** Map 175
[Prószyński, 1979: f. 283-289]
Distribution: Siberian boreo-nemoral range: from Tuva and Xinjiang to upper Kolyma, south to Maritime Prov. and Jilin (Prószyński, 1979; Marusik et al., 1992a; Song et al., 1999).
Sitticus albolineatus (Kulczynski, 1895): 19, 20, 55; ILT: Rpb. (Logunov 1992c).

***Sitticus distinguendus* (Simon, 1868)** Map 179
[Tullgren, 1944: f. I.20-21; Heimer & Nentwig, 1992: f. 1390; Logunov & Marusik, 2000: f. 26-27, 29, 32-33]
Distribution: Trans-Palaearctic nemoral range: from France to Maritime Province and Japan, north to Tomsk and South Yakutia, and south to Shanxi (Logunov & Marusik, 2000). Far eastern records of *S. avocator*, namely in China, Korea and Japan refer to this species.
Sitticus distinguendus (Simon, 1868): 09, 12; MFLT: S; MSLT: S.
Sitticus avocator (O.P.-Cambridge, 1885): 09, 12, 14, 16, 30, 35, 53; MFLT: Sss, S; MSLT: S.

***Sitticus floricola* (C.L. Koch, 1837)** Map 182
[Tullgren, 1944: f. 20a, II.33-34; Heimer & Nentwig, 1992: f. 1385; Roberts, 1995: p.199]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Japan, north to central Yakutia, south to Azerbaijan, Uzbekistan and Japan (Logunov & Marusik, 2000).
Sitticus floricola (C.L. Koch, 1837): 07, 08, 21, 23, 32, 58, 63; ILT: Mm, Rpb; MFLT: Sm. (Logunov 1992c).

***Sitticus lineolatus* (Grube, 1861)** Map 171
[Prószyński, 1971a: f. 14-30; Prószyński, 1971b: f. 37-39]
Distribution: Circum-Holarctic boreo-hypoarctic range: from Kola Peninsula (unpublished data) to Chukotka Peninsula, south to Tuva and Mongolia (Marusik et al., 1992a; Marusik & Logunov, 1998b). In Nearctic distributed from Alaska to Newfoundland, south to Oregon and Wyoming (Dondale et al., 1997).
Sitticus lineolatus (Grube, 1861): 26, 36; GLT: Mwt. (Logunov 1992c).

***Sitticus mirandus* Logunov, 1993** Map 178
[Logunov, 1993: f. 12, 34-39]
Distribution: Central Asian range: from Kyrgyzstan (ca 70°E) to Tuva (Logunov, 1993; Logunov & Rakov, 1998).
Sitticus mirandus Logunov, 1993: 58, 63; ILT: U. (Logunov 1993b).

***Sitticus penicillatus* (Simon, 1875)** Map 179
[Logunov, 1993b: f. 1, 10-11, 18-21; Song & al., 1999: f. 316O, 317C]
Distribution: Trans-Palaearctic nemoral range: from central Europe eastward to Japan, south to Mediterranean, and to south China in the East, north to south Ural (ca 54°N) and Nizhnyaya Tunguska River (ca 64°N) (Logunov, 1993b; Esyunin & Efimik, 1996; Song et al., 1999).
Sitticus penicillatus (Simon, 1875): 20, 37, 55, 58; ILT: Rpb. (Logunov 1992c).

***Sitticus saltator* (O.P.-Cambridge, 1868)** Map 180
[Tullgren, 1944: f. I.18-19; Heimer & Nentwig, 1992: f. 1392]
Distribution: Euro-Baikalian nemoral range: from France to Cisbaikalia, south to Azerbaijan and south Siberia (Logunov, 1996c).
Sitticus saltator (O.P.-Cambridge in Simon, 1868): 53; MSLT: S. (Logunov 1992c).

***Sitticus tannuolana* Logunov, 1991** Map 176

[Logunov, 1991: f. 1.4-6; Logunov, 1992c: f. 7c-d,f]
Distribution: West Mongolian range: known from Tuva and southern part of Krasnoyarsk Province so far (Logunov, 1992c).
Sitticus tannuolana Logunov, 1991: 08, 27; MFLT: Mf, Lf. (Logunov 1991, 1992c).

***Synageles hilarulus* (C.L. Koch, 1846)** Map 180
[Heimer & Nentwig, 1992: f. 1394; Prószyński, 1979: f. 291]
Distribution: Trans-Palaearctic nemoral range: from France to the Russian Far East (Logunov, 1996c).
Synageles hilarulus (C.L. Koch, 1846): 17, 58; ILT: U, As. (Logunov 1992c).

***Synageles ramitus* Andreeva, 1976** Map 171
[Logunov & Rakov, 1996: f. 9-11, 23-25; Song et al., 1999: f. 317O-P, 318D-E]
Distribution: Central Asian range: from Turkmenistan to Central Mongolia, and north to Tuva (Logunov & Marusik, 2000).
Synageles ramitus Andreeva, 1976: 63; MSLT: Sds. (Logunov & Rakov 1996).

***Synageles venator* (Lucas, 1836)** Map 181
[Tullgren, 1944: f. IV.71-73; Heimer & Nentwig, 1992: f. 1396; Roberts, 1995: p.205; Logunov & Rakov 1996: f. 36-42; Song et al., 1999: f. 318F-G]
Distribution: Trans-Palaearctic nemoral range: from western Europe to Sakhalin, north to southern Finland up to 62°N (SK, personal data), north Ural (Esyunin & Efimik, 1996), south to Uzbekistan (?) and Xinjiang (Logunov & Marusik, 2000).
Synageles venator (Lucas, 1836): 01; MFLT: Sgg. (Logunov & Rakov 1996).

***Talavera aequipes* (O.P.-Cambridge, 1871)** Map 181
[Thaler, 1981: f. 62; Heimer & Nentwig, 1992: f. 1330; Roberts, 1995: p.197]
Distribution: Trans-Palaearctic boreo-nemoral range: from France and Great Britain to Yakutia and Jilin, and south to Tajikistan and Hunan (Logunov & Marusik, 2000).
Talavera aequipes (O.P.-Cambridge, 1871): 50, 59; MSLT: Cxs. (Logunov 1992c, *Logunov et al.* 1993: sub. *Euophrys a.*).

***Talavera* sp. 1**
Distribution: Mongolian range: This is new species closely related to *T. petrensis* (C.L. Koch, 1937) and known so far from Tuva and Central Aimak in Mongolia (sub *Talavera* sp. 1, Marusik & Logunov, 1998b).
Talavera sp. 1 (*cf. petrensis*): 14; MSLT: Dbs.

***Talavera* sp. 2**
Comments. Tuvan endemic (?). This new species from the *aequipes* species group is known only from one locality (#54) in Tuva. Second record of this species from Tuva (# 63) (cf. Logunov et al., 1998) belongs to the other new species listed below.
Talavera sp. 2 (*cf. trivittata*): 54, 63; GLT: Mst; ILT: U.

***Talavera* sp. 3**
Comments. Tuvan endemic (?). This new species is distant from all known Talavera species and is known from only one locality (#63) in Tuva. In our check-list (Logunov et al., 1998), it was listed together with *Talavera* sp. 2.
Talavera sp. 2 (*cf. trivittata*): 54, 63; GLT: Mst; ILT: U.

***Tuvaphantes arat* Logunov, 1993**
[Logunov, 1993a: 4a-c]
Distribution: Tuvan endemic. Is known from a single locality.
Tuvaphantes arat Logunov, 1993: 58; ILT: Ism. (Logunov 1993a).

***Tuvaphantes insolitus* (Logunov, 1991)**
[Logunov, 1991: f. 4.7-8; Logunov, 1993a: 4d-f]
Distribution: Central Tuvan endemic. Known from only East Tannu-Ola Mt. Range.
Tuvaphantes insolitus (Logunov, 1991): 19, 25; MFLT: Sms. (Logunov 1991: sub. *Dendryphantes i.*, 1993a).

***Yllenus coreanus* Prószyński, 1968** Map 180
[Prószyński: 1968: f. 90-91; Logunov & Marusik, 2000: f. 40-43]
Distribution: Mongolo-Manchurian range: from East-Kazakhstan Area to Korea, and south to north Mongolia (Logunov & Marusik, 2000).
Yllenus sp. 2 (*cf. hamifer*): 12, 16, 45, 50, 55; ILT: Rpb; MSLT: Dns, Dbs, S, Cxs.

***Yllenus kulczynskii* Punda, 1975** Map 176
[Logunov, 1992c: f. 8-9]
Distribution: Mongolian range: known from Tuva to Buryatia, south to Middle Gobi Aimak (Logunov, 1992c).
Comments. It is very likely that Tuvan and Buryatian records of this species may belong to a new species.
Yllenus kulczynskii Punda, 1975: 49, 53, 55, 61, 63; MSLT: Sds, Dbs. (Logunov 1992c).

***Yllenus mongolicus* Prószyński, 1968** Map 179
[Prószyński, 1968: f. 111-118]
Distribution: Pan-Mongolian range: from Bajan-Ölgiy to Eastern Aimak, north to Tuva and Buryatia and south to South Gobi (Logunov & Marusik, 2000).
Yllenus mongolicus Prószynski, 1968: 12, 34, 63; MSLT: Dns, Sds. (Prószynski 1982, Logunov 1992c).

***Yllenus tuvinicus* Logunov & Marusik, 2000**
[Logunov & Marusik, 2000: f. 55-58]
Distribution: Tuvan range: found in east and west Tuva only (Logunov & Marusik, 2000).
Yllenus sp. 1 (*cf. koreanus*): 12, 29a, 49, 53, 55, 61, 63; ILT: Rpb, Ism, As; MSLT: Sds, Dns, Dbs.

TETRAGNATHIDAE

***Pachygnatha clercki* Sundevall, 1823** Map 214
[Levi, 1980: f. 226-237; Roberts, 1995: p.300; Heimer & Nentwig, 1992: f. 121]
Distribution: Circum-Holarctic polyzonal range: from Portugal (Cardoso, 1999) to Chukotka, north to Lapland (65°N, Palmgren, 1974a), Polar Ural (Esyunin & Efimik, 1996), Lena River mouth (over 71°N, Marusik et al., 1993) and Chukotka Peninsula (Marusik et al., 1992a), south to Spain and Shaanxi (Song et al., 1999). In Nearctic distributed from Alaska to Washington D.C. (Levi, 1980).
Comments. Records from SE Asia require confirmation. In South Sakhalin, Kunashir Island and the south part of Maritime Province there is a closely related species (Crawford, personal communication & personal data).
Pachygnatha clercki Sundevall, 1823: 17, 34, 51, 55; ILT: Rpb, Mm, As; MFLT: Sm.

***Pachygnatha degeeri* Sundevall, 1830** Map 182
[Heimer & Nentwig, 1992: f. 120; Roberts, 1995: p.301]
Distribution: Trans-Palaearctic boreo-nemoral range: from Portugal (Cardoso, 1999) to Kamchatka, north to Lapland (Palmgren, 1974a), north Ural (Esyunin & Efimik, 1996) and north Cisokhotia (Marusik et al., 1992a), in Asia south to Azerbaijan and Kyrgyzstan (Mikhailov, 1997).
Pachygnatha degeeri Sundevall, 1830: 08; MFLT: Sgg.

***Pachygnatha listeri* Sundevall, 1830** Map 183
[Heimer & Nentwig, 1992: f. 122; Roberts, 1995: p.300]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to north Cisokhotia and Sakhalin, north to Lapland (Palmgren, 1974a), north Ural (Esyunin & Efimik, 1996) and lower Aldan River (Marusik et al., 1993), in Asia south to Azerbaijan and Kazakhstan (Mikhailov, 1997).
Pachygnatha listeri Sundevall, 1830: 01, 09, 12, 14, 17, 31, 48, 49, 51, 58, 63; ILT: U, Bf, As, Mm; MFLT: Sm.

***Tetragnatha cf. caudicola* (Karsch, 1879)**
Comments. Status of this rather common species requires special study.
Eucta sp. 1: 12, 27, 32, 34, 63; ILT: Ism, As; MFLT: Sms; MSLT: Dbs.

***Tetragnatha dearmata* Thorell, 1873** Map 214
[Levi, 1981: f. 5f, 65-73; Roberts, 1995: p.305]
Distribution: Circum-Holarctic boreo-nemoral range: from Central Europe to E Chukotka, north to north Lapland south to Caucasus and Mongolia (Palmgren, 1974a; Esyunin & Efimik, 1996; Marusik et al., 1992a; Marusik & Logunov, 1998b). In Nearctic distributed from Alaska to New Scotia, south to Washington State and Oklahoma (Levi, 1981).
Comments. A few specimens were collected by sweeping grass and shrubs in a poplar stand.
Tetragnatha dearmata Thorell, 1873: 63; ILT: U, Bf.

***Tetragnatha extensa* (Linnaeus, 1758)** Map 184
[Levi, 1981: f. 5e, 56-64; Heimer & Nentwig, 1992: f. 124; Roberts, 1995: p.302]
Distribution: Circum-Holoractic polyzonal range: almost whole Palaearctic except areas north of 70°N: throughout Europe, North Africa, Central Asia (separate subspecies), Himalayas (personal data) and throughout Siberia from tundra to steppe zone, in East Palaearctic southward to Honshu. In Nearctic known from north Alaska to Greenland, south to New England and New Mexico (Levi, 1981).
Comments. Common inhabitant of herbaceous vegetation and shrubs near shores.
Tetragnatha extensa (Linnaeus, 1758): 01, 05, 07, 09, 12, 13, 17, 23, 28, 34, 35, 57, 62, 63; ILT: Mm, As; MFLT: Mf, Sm, Sgg, Sms; MSLT: Dbs, Sds.

***Tetragnatha nigrita* Lendl, 1886** Map 185
[Heimer & Nentwig, 1992: f. 128; Roberts, 1995: p.304]
Distribution: Trans-Palaearctic nemoral range: from Portugal (Cardoso, 1999) to Shandong, north to south Sweden, south Ural, and south to Azerbaijan and Tuva (Prószyński & Staręga, 1971; Palmgren, 1974a; Esyunin & Efimik, 1996; Mikhailov, 1997).
Tetragnatha nigrita Lendl, 1886: 07, 63; MFLT: Mf; ILT: U.

***Tetragnatha obtusa* C.L. Koch, 1837** Map 182

[Heimer & Nentwig, 1992: f. 129; Roberts, 1995: p.304]
Distribution: Trans-Palaearctic (?) nemoral range: from western Europe to Kamchatka, north to south Finland, north Ural, and south to Georgia and Tuva (Prószyński & Staręga, 1971; Palmgren, 1974a; Esyunin & Efimik, 1996; Mikhailov, 1997).
Tetragnatha obtusa C.L. Koch, 1837: 63; ILT: As.

***Tetragnatha pinicola* L. Koch, 1870** Map 184
[Heimer & Nentwig, 1992: f. 125; Roberts, 1995: p.303; Song et al., 126F,S, 128I-L]
Distribution: Trans-Palaearctic boreo-nemoral range: from western Europe to Kamchatka, north to Lapland, Cispolar Ural, Lena River mouth, and south to Azerbaijan and Shikoku (Palmgren, 1974a; Esyunin & Efimik, 1996; Marusik et al., 1993; Mikhailov, 1997; Tsurusaki, personal communication).
Tetragnatha pinicola L. Koch, 1870: 01, 04, 07, 08, 09, 11, 14, 23, 28, 40, 44; MFLT: Mf, Lf, Sgg; GLT: Sm, S.

THERIDIIDAE

***Achaearanea riparia* (Blackwall, 1834)** Map/15-74
[Roberts, 1995: p.278; Song et al., 1999: 41E-F,K-L]
Distribution: Trans-Palaearctic nemoral range: from Europe through South Siberia to Sakhalin (Mikhailov, 1997), and south to Beijing (Song et al., 1999).
Achaearanea riparia (Blackwall, 1834): 01, 03; GLT: Mwt; MFLT: Mf.

***Achaearanea tepidariorum* (C.L. Koch, 1841)**
[Roberts, 1995: p.279; Song et al., 1999: f. 43E-F,K-L]
Distribution: Cosmopolitan range: in Asia north of 50°N it is exclusively synantropic dweller. Northernmost record is Wrangel Island (ca 72°N, Marusik et al., 1992).
Achaearanea tepidariorum (C.L. Koch, 1841): 12; ILT: U.

***Achaearanea* sp. 1**
Comments. Status of this species is unclear, a few females are known only.
Achaearanea sp. 1: 53; MSLT: Dbs.

***Arctachaea nordica* (Chamberlin et Ivie, 1947)** Map 184
[Levi, 1957b: f. 1-2, 7-11; ? Song et al., 1999: f. 75A-B,G-H]
Distribution: Siberio- W Nearctic range: from South Ural throughout south Siberia to Yakutia and Magadan Area along azonal steppes northward to lower Lena River and eastward to upper Kolyma (Marusik et al., 1992a, 1993), southward to Mongolia (Marusik & Logunov, 1998b) and China (?, sub *Theridion liaoyuanensis* Zhu & Yu, 1982). In Nearctic known from Alaska to Northwest Territories south to California and Colorado (Levi & Randolph, 1973; Dondale et al., 1997).
Comments. Inhabits steppe and dry meadow vegetation.
Arctachaea nordica (Chamberlin & Ivie, 1947): 07, 11; MFLT: Sss, Sms.

***Crustulina sticta* (O.P.-Cambridge, 1861)** Map 189
[Roberts, 1995: p.273; Song et al., 1999: f. 53C-D,F]
Distribution: Circum-Holarctic boreo-nemoral range: from western Europe to Japan (Tsurusaki, personal communication) and South Kuril Islands (personal data), north to Central Finland (Palmgren, 1974b), in Asia north to middle Ural (Esyunin & Efimik,

1996), south to Israel (Levy, 1998) and Beijing (Song et al., 1999). In Nearctic known from Alaska to Newfoundland, south to Texas (Levi & Randolph, 1975)
Crustulina sticta (O.P.-Cambridge, 1861): 11; MFLT: Sms.

***Dipoena prona* (Menge, 1868)** Map 189
[Palmgren, 1974b: 2.27-29; Heimer & Nentwig, 1992: f. 765; Roberts, 1995: p.269]
Distribution: Euro-Mongolian-Trans-Nearctic nemoral range: from western Europe to Tuva, north to south Finland (Palmgren, 1974b), south to Yugoslavia (Nicoli□, 1981). In Nearctic known in USA from California to New England (Levi & Randolph, 1975).
Dipoena prona (Menge, 1868): 09; ILT: U, Mm.

***Dipoena* sp. 1**
Comments. It seems to be an undescribed species.
Dipoena sp. 1: 07; MFLT: Mf; ILT: Ism.

***Dipoena* sp. 2**
Comments. It seems to be an undescribed species.
Dipoena sp. 2: 53; MSLT: S.

? ***Enoplognatha caricis* (Fickert, 1876)** Map 190
[Levi, 1957: f. 11, 25, 28-29, 34-37; Heimer & Nentwig, 1992: f. 772; Roberts, 1995: p.292; Bosmans & Van Keer, 1999: f. 18-23]
Distribution: Circum-Holarctic (?) disjunctive (?) boreo-nemoral range: from France (Bosmans & Van Keer, 1999) to Kamchatka, north to Southern England, Poland (type locality) and North Cisokhotia, south to Xinjiang, Inner Mongolia (Song et al., 1999) and south Kuriles (personal data). Between Ukraine and Xinjiang this species has been recently recorded from northern Ural (Esyunin & Efimik, 1998a). In Nearctic known from Alaska to Newfoundland, south to Texas (Levi, 1957), while it is absent from Yukon to California and Ontario.
Comments. *E. tecta* was recently synonymised with *E. caricis* (R□□i□ka & Holec, 1998). Bosmans & Van Keer (1999) treated the name *caricis* as a *nomen dubium*. Judging from the illustrations listed above, and material studied from Tuva and Mongolia it is possible that several sibling species occur in Holarctic, and therefore this group requires further revision.
New locality: 23.
Enoplognatha tecta (Keyserling, 1884): 17, 34, 51, 63; ILT: Bf, As.

? ***Enoplognatha gramineusa* Zhu, 1998** Map 183
[Zhu, 1998: f. 206a-e; Song et al., 1999: f. 59A-B,I-J]
Distribution: Mongolian (?) range: from Khakassia to Buryatia (personal data) south to South Gobi (sub *E. cf. mandibularis* (Lucas, 1846), Marusik & Logunov, 1998b) and Inner Mongolia (Zhu, 1998).
Comments. Males of this species (palps and chelicerae) are very similar to *E. wyuta* Chamberlin et Ivie, 1942, known from few states in Central USA , namely South Dakota, Wyoming and Utah (Levi, 1957), but females of these two species are different. Differences in the females and the large disjunction in their ranges make it unlikely that the two populations are conspecific. A similar range disjunction was found between two other spider species: *Acantholycosa sterneri* (trans-Mongolian range) and *P. solituda* Levi & Levi, 1951 (Southern Alberta to Utah and Colorado) (Kronestedt & Marusik, personal data). Occurs in various types of xeric habitats with stones.
New locality: 43
Enoplognatha sp. 2: 12, 27, 29, 30, 35, 38, 52, 53, 56; MFLT: Sms, Sss, S; MSLT: Dns, S.

***Enoplognatha serratosignata* (L. Koch, 1879)** Map 187
Enoplognatha aituarca Esyunin et Efimik, 1998a: 147, f. 8-11. **Syn. n.**
[Palmgren, 1974b: f. 8.11,13; Holm, 1973: f. 1-3; Wunderlich, 1976: f. 27-33; Bosmans & Van Keer, 1999: f 108-112]
Distribution: Trans-Palaearctic boreo-montane range (?): from Switzerland to Kolyma River, north to Finland (sub *E. mandibularis* ?, Palmgren, 1974b) and Kolyma River mouth (personal data), and southward to Mongolia and Gansu (Marusik & Logunov, 1998b; Bosmans & Van Keer, 1999).
Comments. The female from Finland illustrated by Palmgren (1974b) as *"E. mandibularis* ?" undoubtedly belongs to *E. serratosignata.* Figures of the male palp and chelicerae were taken from an identification book of British spiders and therefore are not conspecific with the Finnish female.
The recently described *E. aituarca* Esyunin et Efimik, 1998 from south Ural probably is conspecific with this species, while judging from drawings of Bosmans & Van Keer (1999) and those of Esyunin & Efimik, (1998a), Central European and "Finno-Siberian" populations may belong to different species.
New localty: 50.
Enoplognatha serratosignata (L. Koch, 1879): 09, 27, 45, 52, 60; ILT: Mm; MFLT: Sss, Sms; MSLT: Cxs, S.

***Enoplognatha* sp. 1**
Comments. This species is represented in our collection by females only. It is possible that these females represent small specimens of *E. gramineusa*.
Enoplognatha sp. 1: 12, 27, 53: MSLT: Dbs, Dns; MFLT: Sss.

***Euryopis levii* Heimer, 1987** Map 189
[Heimer, 1987: f. 1-3]
Distribution: Mongolian range: known only from south Tuva and Mongolia (Marusik & Logunov, 1998b). In Mongolia found in Bayankhongor and South Gobi Aimaks.
Euryopis levii Heimer, 1987: 58; ILT: U.

***Euryopis saukea* Levi, 1951** Map 190
[Levi, 1951: f. 5-9; Levi, 1954: f. 2, 5]
Distribution: Circum-Holarctic (?) boreo-nemoral range: from Central Europe to south Ural, Tuva and northeast to Kolyma River mouth (Esyunin & Efimik, 1996; Marusik et al., 1992a; Logunov et al., 1998; personal data). In Nearctic known from Michigan to Minnesota (Levi & Randolph, 1975).
Euryopis saukea Levi, 1951: 11, 50; MFLT: Sms; MSLT: Cxs.

***Neottiura bimaculata* (Linnaeus, 1758)** Map 191
[Palmgren, 1974b: 3.12-14; Roberts, 1995: p.289; Song et al., 1999: f. 72A-B,O-P; Knoflach, 1999: f. 1-5, 10-11, 23-35, 44, 47, 50, 56, 64-65]
Distribution: Trans-Palaearctic-NW Nearctic nemoral range: from Iberian Peninsula

(Cardoso, 1999) throughout Eurasia, north to middle Finland (Palmgren, 1974b), south in Indian Himalayas (personal data). Easternmost record in Palaearctic is South Kuriles (Marusik et al., 1992b). In Siberia was found only in the south. In Nearctic known from British Columbia and Washington State (Levi & Randolph, 1975).
Neottiura bimaculata (Linnaeus, 1767): 17, 13, 14, 23, 58, 63; ILT: Mm, As, U; MFLT: Lf, Sm, Bef.

***Robertus kastoni* Eskov, 1987** Map 187
[Eskov, 1987b: f. 3-7]
Distribution: Siberian boreal range: from Evenkia and Tuva to upper Kolyma and north Cisokhotia (Eskov, 1987b, Marusik et al., 1992a).
Comments. Moss dweller in taiga forests and in mountain tundra.
Robertus kastoni Eskov, 1987: 02, 31, 35, 40; GLT: Mwt; MFLT: Mf.

***Robertus lividus* (Blackwall, 1836)**
[Knoflach, 1992: f. 8-9, 11, 17-19, 25, 20-31, 38-43; Roberts, 1995: p.293]
Distribution: Trans-Palaearctic-Alaskan range: throughout whole Europe to Polar Ural eastward to upper Kolyma and southward to Sakhalin and Sakhalin (Mikhailov, 1997).
Comments. Inhabits deciduous tree stands.
Robertus lividus (Blackwall, 1836): 14, 31; ILT: U; MFLT: ?.

***Robertus ungulatus* Vogelsanger, 1944** Map 185
[Miller, 1967: f. X.1-3, XI.10-12; Wunderlich, 1976: 49-52; Song et al., 1999: f. 66L-M,R-S]
Distribution: Trans-Palaearctic (?) disjunctive nemoral range: from Central Europe to Kurile Islands (Mikhailov, 1997) with disjunction between the Alps and Tuva, and Tuva and Far East, southward to Liaoning (Song et al., 1999).
Comments. Majority of specimens were taken in peat bog in locality #63.
Robertus ungulatus Vogelsanger, 1944: 30, 63; ILT: Mm; MFLT: Sss, Sm.

***Steatoda albomaculata* (De Geer, 1778)** Map 191
[Roberts, 1995: p.274; Knoflach, 1996a: f. 6-8, 12-21; Song et al., 1999: f. 67A-B,I-J]
Distribution: Circum-Holarctic polyzonal range: almost all of Palaearctic except Siberia north of 67°N. In Nearctic known from Yukon Territory to New Brunswick, south to California and Connecticut (Dondale et al., 1997). In east Chukotka, single female was found on pebbly river banks within a kind of tree oasis in tundra zone (Marusik, 1993c).
Comments. Occurs in various xeric habitats, from pebbly river banks to dry steppes.
Steatoda albomaculata (De Geer, 1778): 02, 06, 08, 09, 10, 12, 21, 23, 25, 27, 29, 30, 31, 32, 33, 34, 44, 45, 46, 49, 50, 53, 55, 56, 57, 58, 61, 63; ILT: As, Rpb, Ism; MSLT: Dns, Dbs, S, Cxs, Sds; MFLT: Sss, S.

***Steatoda bipunctata* (Linnaeus, 1758)** Map 192
[Heimer & Nentwig, 1992: f. 800; Roberts, 1995: p.275; f. Song et al., 1999: f. 67E-F,M]
Distribution: East Nearctic-Trans-Palaearctic boreo-nemoral range: from Iberian Peninsula (Cardoso, 1999) to Kamchatka, north to Lapland (Palmgren, 1974b), Cispolar Ural (Esyunin & Efimik, 1996) and western Yakutia (Marusik et al., 1993), south to Turkmenistan (Mikhailov, 1997) and Inner Mongolia (Song et al., 1999). In Nearctic known from Ontario to Newfoundland (Nyffeler et al., 1986).
Comments. Catalogue references for occurrence of this species in Neotropics and even in North Africa (cf. Prószyński & Staręga, 1971; Esyunin & Efimik, 1996) require re-examination. Record of *S. bipunctata* in Turkmenistan (cf. Mikhailov, 1997) refers to another species (Gromov, personal communication).
Steatoda bipunctata (Linnaeus, 1758): 46, 49; ILT: U, Ism.

***Steatoda phalerata* (Panzer, 1801)** Map 185
[Heimer & Nentwig, 1992: f. 796; Roberts, 1995: p.276; Knoflach, 1996b: 1, 5-8, 10, 12-14, 17, 21-32, 66, 70- 71, 75-76; Song et al., 1999: f. 69G-H,O-P]
Distribution: Trans-Palaearctic boreo-nemoral range: from Portugal (Cardoso, 1999) eastward to the Russian Far East, north Lapland, lower Lena River (Marusik et al., 1993) and southward to Azerbaijan, Kyrgyzstan (Mikhailov, 1997) and Hebei (Song et al., 1999).
Comments. Occurs in dry meadows and meadow-steppes.
Steatoda phalerata (Panzer, 1801): 23, 27, 28, 30, 35, 53, 56, 58; ILT: Ism; MSLT: S, Dbs; MFLT: Sss, Sms.

***Steatoda cf. triangulosa* (Walckenaer, 1802)** Map 188
Distribution: Mongolian range: from Tuva to Buryatia (unpublished data) and southward to South Gobi (sub *Steatoda sp.,* Marusik & Logunov, 1998b).
Comments. Lives in rock grooves within cliffs. Can be easily collected at night only.
Steatoda sp. 1: 09, 14, 27, 30, 32, 44, 53, 55; MFLT: S, Sss, Sms; MSLT: Dbs, Dns, S.

***Theridion aurantium* Emerton, 1915** Map 192
[Levi, 1957: f. 337-339, 350-352]
Distribution: Circum-Holarctic boreal range: from Karelia (Marusik, 1989b) to north Cisokhotia (Marusik et al., 1992a), south to Tuva. In Nearctic known from Alaska to Newfoundland, south to Wyoming and Wisconsin (Dondale et al., 1997).
Comments. Inhabits shrubs.
Theridion aurantium Emerton, 1915: 07, 31; MFLT: Mf, Sms.

***Theridion impressum* L. Koch, 1881** Map 193
[Levi, 1957: f. 321, 326-328; Palmgren, 1974b: f. 4.1-4; Roberts, 1995: p.282; Zhu, 1998: 100a-e]
Distribution: Trans-Palaearctic-NW Nearctic polyzonal range: throughout Eurasia from south tundras to deserts, southward to Himalayas (personal data). In Nearctic known from Alaska to western Northwest Territories and southward to northern Alberta (Dondale et al., 1997).
Comments. Lives in large variety of habitats from mountain tundra to dry steppes. Construct webs and retreats on shrubs or strong grass.
Theridion impressum L. Koch, 1881: 07, 08, 09, 10, 11, 12, 14, 23, 25, 27, 30, 31, 32, 33, 34, 35, 36, 44, 48, 58, 63; ILT: Ism, Rpb, As; MFLT: Sss, Sgg, Sms, Lf, Mf; MSLT: Dbs, Dns.

? ***Theridion karamayensis* Zhu, 1998** Map 191
[Zhu, 1998: f. 106a-e; Song et al., 1999: f. 74C-D, I-J]
Distribution: West Mongolian range: from Xinjiang (type locality) north to Tuva, east to Transbaikalia and south to Bayankhongor (personal data).
Comments. The question mark for this species is because the tegular apophysis of Tuvan specimens is somewhat different from those depicted by Zhu (1998). These differences may be caused by different way of illustration techniques. In any case the Tuvan popula-

tion is much more similar to *T. karamayensis* than to *T. montanum*. Part of the records listed below, at least ## 05 & 08 refer to "true" *T. montanum* (Gromov, personal communication).
? *Theridion montanum* Emerton, 1882: 05, 08, 12, 30, 32, 53; MFLT: Mf, Lf, S; MSLT: Dns, S.

***Theridion montanum* Emerton, 1882** Map 193
[Levi, 1957: f. 251-256; Palmgren, 1974b: f. 6.15-18]
Distribution: Circum-Holarctic boreo-nemoral range: from southern Finland (Palmgren, 1974b) via north Ural (Esyunin & Efimik, 1996) to south Cisokhotia (Marusik, et al., 1992a), south to Sayany and Sakhalin (Marusik et al., 1992b). In Nearctic known from Yukon to Newfoundland, south to Oregon, and Tennessee (Dondale et al., 1997).
Comments. This species known at least from two localities ## 05 & 08. Gromov confirmed our identification. Southern records refer to *T. karamayensis*. In both cases it was found in coniferous or mixed forests.
? *Theridion montanum* Emerton, 1882: 05, 08, 12, 30, 32, 53; MFLT: Mf, Lf, S; MSLT: Dns, S.

***Theridion ohlerti* Thorell, 1870** Map 194
[Levi, 1957: f. 324-325, 332-334; Palmgren, 1974b: 6.11-14]
Distribution: Circum-Holarctic hypoarcto-boreo-montane range: from Europe to Chukotka (Marusik et al., 1992a) south to Mongolia. In Nearctic known from tundra (including Greenland) and taiga zones and highlands south to New Mexico (Levi, 1957; Dondale et al., 1997).
Comments. Occupies mesophytic open and semiopen habitats in taiga belt.
Theridion ohlerti (Thorell, 1870): 07, 08, 11, 21, 23, 25, 30, 31, 35, 46; ILT: Ism; MFLT: Lf, Mf, Sgg.

***Theridion palmgreni* Marusik & Cellarius, 1986** Map 186
[Palmgren, 1974: f. 7.4-8; Marusik & Cellarius, 1986: f. 1-4]
Distribution: Euro-Baikalian boreal range: from Finland and Estonia east to Krasnoyarsk Province, south to Tuva (Marusik & Cellarius, 1986).
Theridion palmgreni Marusik & Cellarius, 1986: 23; MFLT: Mf.

***Theridion petraeum* L. Koch, 1872** Map 194
[Levi, 1957: f. 59, 60, 64-66; Heimer & Nentwig, 1992: f. 820; Knoflach, 1998: f. 39, 41, 45, 51, 60-61]
Distribution: Circum-Holarctic boreo-nemoral range: North Africa (?), Central & South Europe, Kazakhstan (Levi, 1957; Mikhailov, 1997), via south-western Siberia to Transbaikalia northward to Central Yakutia (Marusik et al., 1993), eastward to upper Kolyma (Marusik et al., 1992a) and southward to Mongolia (Marusik & Logunov, 1998b). In Nearctic known from Yukon to Newfoundland, south to California and Maine (Dondale et al., 1997)
Theridion petraeum L. Koch, 1872: 12, 15, 33, 49, 51; MSLT: Dbs; ILT: As.

***Theridion pictum* (Walckenaer, 1802)** Map 195
[Levi, 1957: f. 164-165, 168-170, 173; Palmgren, 1974b: f. 6.1-4; Roberts, 1995: p.283; Knoflach, 1998: f. 40, 43, 50, 59]
Distribution: Circum-Holarctic boreo-nemoral range: North Africa, Europe, Caucasus, Central Asia (Levi, 1957; Mikhailov, 1997), via south half of Siberia (up to 62°N) to Transbaikalia northward to Central Yakutia (Marusik et al., 1993), eastward to Kamchatka (Mikhailov, 1997) and southward to Mongolia (Marusik & Logunov, 1998b) and Maritime Prov. (personal data). In Nearctic known from Northwest Territories to Nova Scotia, south to Utah (Levi, 1957).
Theridion pictum (Walckenaer, 1802): 02, 07, 23, 31, 63; GLT: S; ILT: Mm; MFLT: Mf, Lf; MSLT: Sds.

***Theridion sibiricum* Marusik, 1988** Map 188
[Marusik, 1988a: f. 6.1-6]
Distribution: Siberian boreo-nemoral range: from middle Ural (Esyunin & Efimik, 1996) to upper Kolyma and Kamchatka, south to Tuva, Mongolia (Marusik, 1988a; Marusik & Logunov, 1998b; Logunov et al., 1998) and Maritime Prov. (personal data).
Comments. Inhabits stony debris and occurs chiefly in screes.
Theridion sibiricum Marusik, 1988: 02, 05, 09, 11, 12, 14, 26, 27, 30, 32, 35, 36, 45, 50, 53; GLT: Mwt; ILT: Ism; MSLT: Dbs, Dns, S, Cxs; MFLT: Sss, S.

***Theridion varians* Hahn, 1833** Map 196
[Levi, 1957: f. 175-178; Palmgren, 1974b: 5.10-13; Roberts, 1995: 284; Song et al., 1999: f. 81E-F,L-M]
Distribution: Trans-Palaearctic- W Nearctic boreo-nemoral range: From western Europe to Sakhalin (Marusik et al., 1992b), north to Arctic Ocean coast in Scandinavia, and 62°N latitude in Siberia (Esyunin & Efimik, 1996; Eskov, 1988c; Marusik et al., 1993), south to Azerbaijan, Turkmenistan (Mikhailov) and Maritime Province (Mikhailov, 1997) and Jilin (Song et al, 1999). In Nearctic known from SW Canada and Washington State (Levi, 1957), where it is was probably introduced. Occurrence in North Africa (cf. Levi, 1957; Prószyński & Staręga, 1971; Esyunin & Efimik, 1996) requires confirmation. At least in Israel, it is replaced by *T. hierichonticum* Levy & Amitai, 1982 (Levy, 1998).
Theridion varians Hahn, 1833: 07, 14, 23, 63; ILT: U; MFLT: Mf, Lf.

***Theridion* sp. 1 (*cf. sibiricum*)**
Comments. Status of this species remains unclear.
Theridion sp. 1 (*cf. sibiricum*): 09, 53; MFLT: S; MSLT: S.

***Theridion* sp. 2**
Comments. Status of this species remains unclear.
Theridion sp. 2: 04; GLT: S.

***Theridion* sp. 3**
Comments. Status of this species remains unclear.
Theridion sp. 3: 08; MFLT: ?.

***Thymoites bellissimum* (L. Koch, 1879)** Map 203
Theridion subimpressum Zhu, 1998: 170, f. 107a-d. **Syn.n.**
[Holm, 1945: f. 1a-d; Holm, 1973: f. 4; Palmgren, 1974b: f. 4.10-14; Song et al., 1999: f. 80E-F]
Distribution: Trans-Palaearctic boreal range: from Lapland (Holm, 1945) to north-south Ural (Esyunin & Efimik, 1996) to upper Kolyma (Marusik et al., 1992a), south to Tuva (Logunov et al., 1998) and Jilin (sub . *T. subimpressum*, Song et al., 1999).
Comments. Illustrations given by Zhu (1998) leave no doubt that *T. subimpressum* is a junior synonym of *T. bellissimum*. Inhabits stony debris and mesophytic meadows.
Thymoites bellissimus (L. Koch, 1879): 03, 07, 23, 36; GLT: S; MFLT: Sm.

***Thymoites oleatus* (L. Koch, 1879)** Map 195
[Holm, 1967: f. 2-4; Holm, 1971: f. 1]
Distribution: Siberio-Nearctic hypoarctic range: from Novaya Zemlya to Gerald Island, south to middle Ural, north Tuva and upper Kolyma and north Kamchatka (Eskov, 1988c; Esyunin & Efimik, 1996; Marusik et al., 1992a; Logunov et al., 1998). In Nearctic known from Yukon Territory to Greenland, south to British Columbia and Mt. Washington (Dondale et al., 1997).
Thymoites oleatus (L. Koch, 1879): 05; MFLT: S.

THOMISIDAE

***Coriarachne depressa* (C.L. Koch, 1837)** Map 195
[Heimer & Nentwig, 1992: f. 1232; Roberts, 1995: p.158]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to north Sakhalin, north to middle Yenisei (ca 62°N, Eskov, 1988c), southward to Azerbaijan (Logunov & Marusik, 1994a; Mikhailov, 1997). Records of this species from Tajikistan and Uzbekistan (Mikhailov, 1997) probably refer to another taxon.
Comments. One male was found under loose bark.
Coriarachne depressa (C.L. Koch, 1837): 07; MFLT: Mf. (Logunov & Marusik 1994a).

***Heriaeus melloteei* Simon, 1886** Map 203
[Ono, 1988: f. 175-179; Song & Zhu, 1997: f. 109a-d]
Distribution: Siberio-Manchurian (East Palaearctic) nemoral-steppe range: from South Ural (Esyunin & Efimik, 1996) via South Siberia eastward to Honshu, northward along azonal steppes to Central Yakutia (ca 64°N, Marusik et al., 1993), and southward to Tibet, Shaanxi (Song et al., 1999) and Kyushu (Tsurusaki, personal communication).
Comments. Inhabits dry meadows and meadow steppes.
Heriaeus mellottei Simon, 1886: 08, 14, 23, 30, 31, 53, 63; MFLT: Sss, Sms, Sgg; MSLT: Dbs, Sds. (Logunov & Marusik 1994a).

***Lysiteles maius* Ono, 1979** Map 199
[Ono, 1980: f. 7-18; Ono et al., 1990: f. 37-41]
Distribution: Nepalo-Manchurian temperate range: from Nepal northward to West Sayany, eastward to Sakhalin, Kunashir and Honshu Islands (Ono et al., 1990; Logunov & Marusik, 1994a).
Lysiteles maius Ono, 1979: 01; MFLT: Mf.

***Misumena vatia* (Clerck, 1757)** Map 196
[Tullgren, 1944: f. 121-123; Dondale & Redner, 1978: f. 431-434; Roberts, 1995: p.154; Ono, 1988: f. 180-185; Song & Zhu, 1997: f. 110a-f]
Distribution: Circum-Holarctic polyzonal range: from Europe and North Africa northeast to Chukotka and southward to Tajikistan (Mikhailov, 1997), Shaanxi (Song et al., 1999) and Kyushu (Tsurusaki, personal communication). In Nearctic known throughout whole USA and Canada southward to Mexico (Dondale & Redner, 1978).
Misumena vatia (Clerck, 1758): 07, 08, 23, 31; MFLT: Sgg. (Logunov & Marusik 1994a).

***Ozyptila arctica* Kulczyński, 1908** Map 197
[Tullgren, 1944: f. 136-138; Dondale & Redner, 1978: f. 473-477; Hippa et al., 1986: f. 1.b,i,j, 2.b,d; Esyunin, 1992: 5.1-5]

Distribution: Trans-Palaearctic-NW Nearctic hypoarcto-montane range: from north Fennoscandia to Chukotka, south to Middle Ural, Altai and Kamchatka, north to Yana River mouth (70°N) (Hippa et al., 1986; Marusik et al., 1992a, 1993; Esyunin & Efimik, 1996). In Nearctic it is known from Alaska to western Northwest Territories, south to northern British Columbia (Dondale et al., 1997). Record of this species in Swiss Alps (Hippa et al., 1986) is based on illustrations and probably refers to *O. rauda* Simon, 1875.
Ozyptila arctica Kulczynski, 1908: 54; GLT: Mwt.

***Ozyptila atomaria* (Panzer, 1801)** Map 199
[Heimer & Nentwig, 1992: f. 1242; Ono et al., 1990: f. 25-27; Roberts, 1995: p.168]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe to northern Iran and India (personal data), eastward to Sakhalin (Ono et al., 1990).
Ozyptila atomaria (Panzer, 1801): 23, 40; MFLT: Lf. (Logunov & Marusik 1994a).

***"Ozyptila" inaequalis* Kulczyński, 1901** Map 199
[Song & Zhu, 1997: f. ?78a-d; Marusik & Logunov, 1995b: f. 42-48; Marusik & Logunov, 2000: f. 27-30]
Distribution: Mongolo-Manchurian nemoral range: from East Kazakhstan to East China (Marusik & Logunov, 1995b). Within China recorded from Shandong, Gansu and Inner Mongolia (Song et al., 1999).
Comments. Together with *"O." pseudoblitea* and some other Asian species, *inaequalis* belongs to a separate genus. Inhabits xeric habitats.
"*Xysticus*" *inaequalis* Kulczynski, 1901: 34; MSLT: Dns. (Logunov & Marusik 1994a).

***Ozyptila orientalis* Kulczyński, 1926** Map 197
[Ovtsharenko, 1979: f. 7-9; Hippa et al., 1986: f. 3.a-b; Ono et al., 1990: 28-32; Esyunin, 1992: f. 1-6; Logunov & Marusik, 1994a: f. 1-2]
Distribution: Caucaso-Siberian boreo-alpine range: alpine belt in Caucasus Major (Ovtsharenko, 1979), and from middle Ural to upper Kolyma River and Kamchatka, and south to Tuva, south Transbaikalia, north Sakhalin (Ono et al., 1990; Marusik et al., 1992a; Logunov & Marusik, 1994a; Esyunin & Efimik, 1996) and Hebei in China (Lie et al., 1999).
Ozyptila orientalis Kulczynski, 1926: 11, 26, 35, 52, 54, 58; GLT: Mwt; ILT: Mm; MFLT: Sms. (Logunov & Marusik 1994a).

***"Ozyptila" pseudoblitea* Simon, 1880** Map 200
[Logunov, 1995b: f. 5a-b; Song et al., 1999: f. 287D, J]
Distribution: Tibeto-Manchurian temperate range: from Tibet north to Tuva and eastward to Korea (Song et al., 1999) and Maritime Province of Russia (Logunov, 1995b).
"Ozyptila" pseudoblitea Simon, 1880: 12; MSLT: Dns.

***Ozyptila rauda* Simon, 1875** Map 200
[Hippa et al., 1986: f. 1a,e-f, 2a,f, 3c; Heimer & Nentwig, 1992: f. 1243]
Distribution: Euro-Mongolian boreo-montane range: from Alps eastward to Yenisei (Logunov & Marusik, 1994a).
Ozyptila rauda Simon, 1875: 03, 04, 35, 40, 56; GLT: Sm. (Logunov & Marusik 1994a).

***Ozyptila scabricula* (Westring, 1851)** Map 200
[Tullgren, 1944: f. 32, IX.139; Heimer & Nentwig, 1992: f. 1239; Roberts, 1995: p.165]
Distribution: Euro-Baikalian boreo-nemoral range: from Europe south to Azerbaijan, Uzbekistan (Mikhailov, 1997), eastward to Cisbaikalia (Logunov & Marusik, 1994a) and Sichuan (Song et al., 1999).
Ozyptila scabricula (Westring, 1851): 09; MFLT: Sms.

***Ozyptila sincera* Kulczyński, 1926** Map 197
[Dondale & Redner, 1978: f. 418, 422, 503-507]
Distribution: Siberio-trans-Nearctic boreal range: from Yenisei to Kamchatka, south to Tuva, south Transbaikalia, Khabarovsk and Hokkaido, north to lower Lena River down flow (67°N) (Logunov & Marusik, 1994a). In Nearctic known from Alaska to Newfoundland, south to Colorado and Minnesota (Dondale et al., 1997).
Comments. Inhabits bogs and mesophytic litter on the margins of forest clearings.
Ozyptila sincera Kulczynski, 1926: 14, 35, 63; ILT: U; MFLT: Mf.

***Ozyptila trux* (Blackwall, 1846)** Map 198
[Heimer & Nentwig, 1992: f. 1248; Roberts, 1995: p.167]
Distribution: Palaearctic -E Nearctic boreo-nemoral range: from Europe eastward to North Kuril Islands (Marusik et al., 1992b) and north to Polar Ural (Esyunin & Efimik, 1996), middle Yenisei (ca 62°N) and north Cisokhotia (ca 60°N) (personal data). In Nearctic a single female was found in Quebec (Dondale & Redner, 1975).
Ozyptila trux (Blackwall, 1846): 05, 07; MFLT: Mf. (Logunov & Marusik 1994a).

***Pistius undulatus* Karsch, 1879** Map 201
[Ono et al., 1990: f. 48-50; Song et al., 1999: f. 275H, 281.F & M]
Distribution: Siberio-Manchurian nemoral range: from South Ural (Esyunin & Efimik, 1996) eastward to Kunashir, southward to Kyushu and Zhejiang (Ono et al., 1990; Song et al., 1999).
Pistius undulatus Karsch, 1879: 01; MFLT: Mf. (Logunov 1990).

***Synaema globosum* (Fabricius, 1775)** Map 201
[Roberts, 1995: p.156; Ono, 1988: f. 148-158; Song & Zhu, 1997: f. 95a-b]
Distribution: Trans-Palaearctic nemoral range: Europe except northern parts and Great Britain via South Siberia to Hokkaido (Tsurusaki, personal communication) and southward to Hebei (Song et al., 1999) and Kyushu (Tsurusaki, personal communication).
Comments. All specimens have been collected by sweeping dry meadows.
Synaema globosum (Fabricius, 1775): 09, 14; MFLT: Sms.

***Thomisus albus* (Gmelin, 1789)** Map 202
[Roberts, 1995: p.153; Marusik & Logunov, 1990: f. 9; Marusik & Logunov, 1995b: f. 17-18; Song & Zhu, 1997: f. 119a-d]
Distribution: Trans-Palaearctic nemoral range: from Europe via South Siberia and Central Asia eastward to eastern China (Song et al., 1999).
Comments. Inhabits dry meadows and steppes.
Thomisus onustus Walckenaer, 1805: 09, 12, 14, 28, 30, 32, 34, 53, 55, 57, 63; ILT: Ism, Bf; MFLT: Sss; MSLT: Dbs, Sds, Dns. (Logunov & Marusik 1994a).

***Tmarus rimosus* Paik, 1973** Map 202
[Logunov, 1992: д-з, а-г; Song & Zhu, 1997: f. 30a-d]
Distribution: Siberio-Manchurian range: from south Ural (Esyunin & Efimik, 1996) eastward to Hokkaido and Honshu (Tsurusaki, personal communication), northward to central-west Yakutia (Marusik et al., 1993) and southward to Gansu and Shanxi (Song & Zhu, 1997).
Tmarus rimosus Paik, 1973: 01; MFLT: Mf. (Logunov 1992a).

? ***Xysticus audax* (Schrank, 1803)** Map 205
[Roberts, 1995: p.159; Ono, 1988: 121-126; Ono et al., 1990: f. 23-24]
Distribution: Trans-Palaearctic boreo-nemoral range: from Europe eastward to North Cisokhotia (Marusik et al., 1992), northward to down Lena River flow (Marusik et al., 1993) and southward to Pamir (Marusik, 1993), Mongolia and Japan (Tsurusaki, personal communication).
Xysticus audax (Schrank, 1803): 05, 07, 08, 09, 12, 14, 23, 26, 28, 31, 34, 36, 40, 51, 56, 57; ILT: As, Mm; MFLT: Sms, Sgg, Sss. (Logunov & Marusik 1994a).

***Xysticus austrosibiricus* Logunov et Marusik, 1998** Map 201
[Logunov & Marusik, 1998: f. 3, 4, 9-10, 13]
Distribution: Mongolo-Yakutian range: from Kemerovo Area in the west south to Uburkhangai and northeast to Central Yakutia (Logunov & Marusik, 1998).
Comments. Most specimens were collected from alpine meadows in mountain tundra.
Xysticus austrosibiricus Logunov & Marusik, 1998: 23, 26, 35, 36, 39, 45, 47, 52, 54, 56; GLT: Mst, Mwt. (Logunov & Marusik 1994a: sub. *X. viduus*; Logunov & Marusik 1998).

***Xysticus baltistanus* (Caporiacco, 1935)** Map 205
[Marusik, 1988a: f. 7.1-7; Song & Zhu, 1997: f. 39a-c, 68a-c]
Distribution: East Palaearctic polyzonal range: from Karakoram Mt Range in the south to North Tien-Shang (Marusik & Logunov, 1995b), eastward to Kolyma River mouth, southward to Sichuan (sub *X. quadratus* Tang & Song, 1988, Song & Zhu, 1997).
Xysticus baltistanus (Caporiacco, 1935): 12, 16, 18, 27, 30, 35, 40 32, 53, 55; MFLT: Sss; MSLT: Dbs, Dns, S. (Logunov & Marusik, 1994a).

***Xysticus bifasciatus* C.L. Koch, 1837** Map 202
[Heimer & Nentwig, 1992: f. 1259; Roberts, 1995: p.162]
Distribution: Euro-Lena boreo-nemoral range: from Europe northeast to Aldan River, southward to Uburkhangai and north Kyrgyzstan and Uzbekistan (Marusik & Logunov, 1995b).
Xysticus bifasciatus C.L. Koch, 1837: 07, 08, 23, 26; MFLT: Sms, Sgg. (Logunov & Marusik 1994a).

***Xysticus bonneti* Denis, 1937** Map 207
[Thaler, 1981: f. 46-49; Marusik, 1989a: f.2.10; Esyunin, 1992: f.61-7; Heimer & Nentwig, 1992: f. 1270]
Distribution: Euro-Baikalian disjunctive boreo-alpine range: mountains of Central and South Europe, Middle and South Ural (Esyunin & Efimik, 1996), south Siberia west of Baikal (Logunov & Marusik, 1994a).
Comments. Petrophilous species, associated with stones in meadow steppes and other dry and open biotopes.

Xysticus bonneti Denis, 1937: 08, 09, 14, 23, 26, 27, 30, 35, 36, 40, 43, 45, 52, 53, 56, 63; GLT: Mwt; MFLT: Sss; MSLT: Cxs, Sds. (Logunov & Marusik 1994a).

***Xysticus britcheri* Gertsch, 1934** Map 198
[Dondale & Redner, 1978: f. 611-614; Marusik & Logunov, 1995: f. 11]
Distribution: Siberio-trans-Nearctic boreal range: from Polar and North Ural to E Chukotka, south to Tuva, south Cisbaikalia and north Sakhalin (Esyunin & Efimik, 1996; Marusik et al., 1992a,b). In Nearctic distributed from Alaska to Newfoundland, south to North Dakota and New York (Dondale et al., 1997).
Comments. Taiga dweller.
Xysticus britcheri Gertsch, 1934: 02; 22, 35, 40; GLT: Mwt; MFLT: Mf. (Logunov & Marusik 1994a).

***Xysticus dzhungaricus* Tyshchenko, 1965** Map 207
[Marusik & Logunov, 1990: f. 29-31; Song & Zhu, 1997: f. 66a-b]
Distribution: East Palaearctic nemoral range: from Central Asia east of 73°E (Tajikistan-Pavlodar Area, Marusik & Logunov, 1995b), southward to Himachal Pradesh, north India (personal data), eastward to Khabarovsk Province (Logunov & Marusik, 1994a), in Siberia southward to north Xinjiang (sub *X. piceana* Hu & Wu, 1989) and Mongolia.
Xysticus dzhungaricus Tyshchenko, 1965: 08, 09, 23, 27, 35, 40, 44; MFLT: Sms, Sgg. (Logunov 1992b: sub. *X. kiritschenkoi*; Logunov & Marusik 1994a).

***Xysticus emertoni* Keyserling, 1880** Map 206
[Dondale & Redner, 1978: f. 620-624; Song & Zhu, 1997: f. 50a-d]
Distribution: Siberio -Trans-Nearctic boreo-nemoral range: from South Ural throughout whole Siberia [northward to Kolyma River mouth, personal data) and Chukotka (68°N, Marusik et al., 1992a) southward to Central Mongolia] and northern Manchuria (Inner Mongolia and Jilin, Song & Zhu, 1997). In Nearctic known throughout forest zone of Alaska and Canada to New Mexico - Georgia (Dondale & Redner, 1978). The easternmost locality in Asia extends beyond boreal zone; specimens there were collected in a kind of tree oasis (flood plain *Chosenia* forest) within tundra zone in Chukotka.
Comments. Inhabits forest clearings and nearby mesophytic meadows and bogs within taiga belt.
Xysticus emertoni Keyserling, 1880: 07, 08, 19, 23, 26, 27, 31, 36, 56, 58; GLT: Mwt; ILT: U; MFLT: Mf, Lf. (Logunov & Marusik 1994a).

***Xysticus ephippiatus* Simon, 1880** Map 198
[Ono, 1988: f. 83-88; Ono et al., 1990: f. 17-19; Song & Zhu, 1997: f. 51a-d]
Distribution: East Palaearctic range boreo-nemoral range: from Tashkent in Central Asia (Utotchkin, 1968) northeast to north Cisokhotia southward to Hubei (Song & Zhu, 1997) and Shikoku (Ono, 1968).
Xysticus ephippiatus Simon, 1880: 07, 09, 12, 14, 17, 26, 28, 30, 32, 34, 44, 63; ILT: Mm, Ism, U, Rpb; MFLT: Sms, Sss. (Logunov & Marusik 1994a).

***Xysticus hedini* Schenkel, 1936** Map 208
[Ono, 1988: f. 127-129; Logunov, 1995: f. 3a-c; Song & Zhu, 1997: f. 54a-d]
Distribution: Mongolo-Manchurian range: from Xinjiang (Song & Zhu, 1997) via Bayan-Ölgiy and Tuva eastward to Japan (sub *X. bifidus* Paik, 1973, Tsurusaki, personal comunication)

Comments. Steppe dweller.
Xysticus hedini Schenkel, 1936: 34; ILT: Ism.

***Xysticus laticeps* Schenkel, 1963** Map 207
[Song & Zhu, 1997: f. 60a-b; Song et al., 1999: 286E; Marusik & Logunov, 2000: f. 1-5]
Distribution: Mongolian range: from South Tuva, via South Gobi (Marusik & Logunov, 2000) southward to Qinghai and eastward to Inner Mongolia (Song et al., 1999).
Comments. Single female was found near Ubsu-Nur Lake in dry steppe.
Xysticus laticeps Schenkel, 1963: 32; MSLT: Dns.

***Xysticus lineatus* (Westring, 1851)** Map 208
[Tullgren, 1944: 37a, XIII.187-189; Heimer & Nentwig, 1992: f. 1265]
Distribution: Euro-Baikalian boreo-nemoral range: from Central and Northern Europe to Irkutsk Area, north to middle Yenisei (Eskov, 1988c), southward to Azerbaijan (Mikhailov, 1997). Record from Irkutsk may refer to another (undescribed) sibling species.
?Xysticus lineatus (Westring, 1851): 07; MFLT: ?. (Logunov & Marusik 1994a).

***Xysticus luctuosus* (Blackwall, 1836)** Map 206
[Roberts, 1995: p.163; Dondale & Redner, 1978: f. 685-689; Ono et al., 1990: f. 5-7; Marusik & Logunov, 1995b: f. 28-29]
Distribution: Circum-Holarctic boreo-nemoral range: from Europe to Kamchatka (Mikhailov, 1997), northward to north Cisokhotia (Marusik et al., 1992a), southward to Mongolia and Sakhalin (Ono et al., 1990). In Nearctic known from Northwest Territories to Quebec and southward to Oregon and Utah (Dondale & Redner, 1978).
Comments. Occurs in mesophytic meadows.
Xysticus luctuosus (Blackwall, 1836): 01, 07, 11, 31, 40; MFLT: Mf, Lf. (Logunov & Marusik 1994a).

***Xysticus mugur* Marusik, 1990** Map 208
[Marusik & Chevrizov, 1990: f. 7-8; Logunov & Marusik, 1994: f. 6-7]
Distribution: West Mongolian range: from Bayan-Ölgiy to SW Tuva (Logunov et al., 1998) and southward to Bayankhongor, Mongolia (Marusik & Logunov, 1998b).
Xysticus mugur Marusik in Marusik & Chevrizov, 1990: 41, 47, 50, 61; MSLT: Cxs. (Marusik & Chevrizov 1990, Logunov & Marusik 1994a).

***Xysticus nenilini* Marusik, 1989** Map 204
[Marusik, 1989a: f. 1-2; Logunov & Marusik, 1994a: f. 8-9]
Distribution: Siberio-Mongolian steppe range: from Tuva northeast to Central Yakutia (Marusik, 1989a) and southward to south Mongolia (Marusik & Logunov, 1998b).
Comments. Occupies xeric habitats.
Xysticus nenilini Marusik, 1989: 28, 32, 38, 39, 41, 43, 45, 50, 61; ILT: U; MFLT: Sss; MSLT: Dbs, Cxs.(Marusik 1989; Logunov & Marusik 1994a).

***Xysticus obscurus* Collet, 1877** Map 211
[Tullgren, 1944: f. 33.b, X.153-155; Thaler & Knoflach, 1995: f. 1-3, 6, 8, 10-13, 15-16; Logunov & Marusik, 1998: f. 5-6, 11-13]
Distribution: Circum-Holarctic boreo-alpine range: from Central Europe (Alps) (Thaler & Knoflach, 1995) to Polar Ural and north-eastern Yakutia, southward to Kemerovo Area (Logunov & Marusik, 1998). In Nearctic is know from Alaska (personal data) and Northwest Territories to Labrador, and southward to New Hampshire (Dondale & Redner, 1978).

Xysticus obscurus Collet, 1877: 03, 04, 09; GLT: Sm; MFLT: Sms. (Logunov & Marusik 1994a).

***Xysticus rugosus* Buckle et Redner, 1964** Map 211
[Marusik, 1989a: f. 2.9; Dondale & Redner, 1978: f. 711-714; Marusik & Logunov, 1995c: f. 17-23]
Distribution: Siberio-West Nearctic range: from Tuva to upper Kolyma (Marusik et al., 1992a). In Nearctic known from Yukon Territory to southern British Columbia and Alberta (Dondale et al., 1997).
Comments. Inhabits stony placers in mountain tundra but may also occur on pebbly creek banks.
Xysticus rugosus Buckle & Redner, 1964: 02, 03, 47; GLT: Mst, Mwt. (Logunov & Marusik 1994a).

***Xysticus seserlig* Logunov & Marusik, 1994** Map 205
[Logunov & Marusik, 1994a: f. 10-11; Marusik & Logunov, 2000: f. 6-10]
Distribution: Mongolo-Manchurian range: from Tuva (Logunov et al., 1998) eastward to Maritime Province (personal data) and southward to Middle Gobi (Marusik & Logunov, 2000).
Xysticus seserlig Logunov & Marusik, 1994: 11, 31, 49, Boyarovka; MSLT: Dbs. (Logunov & Marusik 1994a).

***Xysticus sharlaa* Marusik & Logunov, 2000** Map 204
[Marusik & Logunov, 2000: f. 11-14]
Distribution: North Mongolian steppe range: from eastern Tuva to Chita Area (Marusik & Logunov, 2000).
Comments. All Tuvan specimens were collected in poplar stand, a kind of oasis on Tere-Khol Lake within sandy desert.
Xysticus sp. 1: 63; ILT: U, Bf.

***Xysticus sibiricus* Kulczyński, 1908** Map 209
[Marusik, 1989a: f. 2.5-8; Ono et al., 1990: f. 3-4; Logunov & Marusik, 1994a: 23-24; Marusik & Logunov, 1995: f. 24-26]
Distribution: Siberian boreal range: from Tuva to Kamchatka, north to lower Lena River and possibly to lower Yana River (Marusik et al., 1993) south to north Mongolia.
Comments. Record of this species from Gansu (Schenkel, 1963) refers to another species (specimen examined). Inhabits tree trunks, chiefly larch.
Xysticus sibiricus Kulczynski, 1908: 05, 06, 56, Sayano-Shushensky Reservation; MFLT: Mf. (Logunov & Marusik 1994a).

***Xysticus sjostedti* Schenkel, 1936** Map 209
[Logunov & Marusik, 1994a: f. 12-15, 19]
Distribution: Mongolian range: from Altai eastward to Buryatia (Logunov & Marusik, 1994) almost all aimaks of Mongolia and Inner Mongolia (Schenkel, 1936).
Comments. Occupies various xeric habitats.
Xysticus sjostedti Schenkel, 1936: 11, 23, 27, 29, 32, 39, 45, 49, 50, 53, 57, 58, 41, 61, 63; MFLT: Sss; MSLT: Dns, Dbs, Cxs. (Logunov & Marusik 1994a).

***Xysticus striatipes* L. Koch, 1870** Map 212
[Heimer & Nentwig, 1992: f 1164; Song & Zhu, 1997: f. 72a-d; Song et al., 1999: f. 287M, 288A]

Distribution: Euro-Baikalian range: from Middle Europe (Heimer & Nentwig, 1992) southward to Uzbekistan-Kyrgyzstan (Marusik & Logunov, 1990), in Siberia from Middle Ural (Esyunin & Efimik, 1996) eastward to Buryatia (Logunov & Marusik, 1994a) and southward to Sichuan (Song et al., 1999).
Xysticus striatipes L. Koch, 1870: 58; MSLT: Dbs. (Logunov & Marusik 1994b).

***Xysticus vachoni* Schenkel, 1963** Map 210
[Utotchkin, 1968: f.126-129; Ono, 1988: f. 62-64]
Distribution: Siberio-Manchurian boreal range: from East Kazakhstan Area (unpublished data) northeast to Chukotka (ca 68°N, 176°E, Marusik et al., 1992a) and southward to north Mongolia and Hokkaido (Ono, 1988). The easternmost locality of *X. vachoni* in Chukotka (Marusik et al., 1992a) extends beyond the boreal zone. There this species was collected in a kind of tree oasis (flood plain *Chosenia* forest) within tundra zone.
Xysticus vachoni Schenkel, 1963: 07, 08, 11, 14, 19, 21, 36; MFLT: Mf, Lf. (Logunov & Marusik 1994b).

TITANOECIDAE

***Titanoeca asimilis* Song & Zhu, 1985** Map 212
T. burjatica Danilov, 1994: 208, f. 43-46. **Syn.n.**
[Song & Zhu, 1985: f. 4-7; Danilov, 1994: f. 43-46**;** Marusik, 1995: 2, 7-8, 16]
Distribution: Mongolian range: from Minusinsk eastward to Buryatia and southward to Shanxi and Tibet (Song et al., 1999).
Comments. Steppe dwelling species.
Titanoeca asimilis Song & Zhu, 1985: 07, 09, 10, 12, 14, 23, 27, 29, 30, 31, 32, 34, 35, 38, 44, 46, 49, 50, 51, 53, 55, 58; ILT: Mm, Rpb; MFLT: S, Sss; MSLT: Dns, Dbs, S, Cxs.

***Titanoeca nivalis* Simon, 1874** Map 213
[Chamberlin & Ivie, 1947: f. 7-8; Leech, 1972: f. 179-180, 376, 381, 439; Thaler, 1981: f. 72]
Distribution: Trans-Palaearctic-W Neartctic boreo-montane range: from European highlands (Thaler, 1981) to north Fennoscandia (Koponen, 1976), in Siberia from Altai (Marusik et al., 1996) northeast to upper Kolyma (Marusik et al., 1992a). In Nearctic from Alaska to Manitoba, south to Arizona and New Mexico (sub *T. silvicola*, Dondale et al., 1997).
Comments. Inhabits open and dry biotopes with stones, but may occur in open deciduous forests and groves.
Titanoeca nivalis Simon, 1874: 06, 07, 08, 09, 53**;** MFLT: Sss, Sms, Mf; MSLT: Dbs, S.

***Titanoeca sibirica* L. Koch, 1879** Map 210
[Holm, 1973: f. 113-117; Marusik, 1995: f. 4, 11-12, 18-20]
Distribution: Trans-Siberian boreo-montane range: from South Ural (Esyunin & Efimik, 1996) northeast to Kolyma River mouth (personal data) and southward to north Mongolia (Marusik & Logunov,1998).
Comments. Found in xeric meadows and among river pebbles.
Titanoeca sibirica L. Koch, 1879: 08, 11, 17, 23, 27, 30, 31, 34, 35, 40, 45, 51, 52; ILT: As, Ism; MFLT: Lf, Sss, Sms, Sgg; MSLT: Cxs.

***Titanoeca* sp. 1**
Comments. Status of the collected females remains unclear.
Titanoeca sp. 1: 58; ILT: Rpb (?).

ULOBORIDAE

***Uloborus walckenaerius* Latreille, 1806** Map 212
[Roberts, 1995: p.90]
Distribution: Trans-Palaearctic nemoral range: from Iberian Peninsula to Japan, north to southern England (Roberts, 1995). Southern limit of distribution is unclear.
Uloborus walckenaerius (Latreille, 1806): 09, 10, 12, 14, 32, 63; ILT: Rpb; MSLT: Dns; Dbs, Sds, S.

ZORIDAE

***Zora* sp. 1**
Comments. Most probably it is an undescribed species. It is widely distributed in Siberia.
Zora sp. 1 (*cf. nemoralis*): 31, 49, 52, 56, 58; ILT: U.

4. Species expected to occur in Tuva

In this chapter we list 54 species that are known in adjacent areas and therefore can be found in Tuva.

AGELENIDAE

***Mastigusa macrophthalma* (Kulczyński, 1897)**
Euro-Yenisei species. Known from middle Yenisei River (personal data).

ARANEIDAE

***Araneus washingtoni* Levi, 1971**
Siberio-Nearctic species. Known in south part of Krasnoyarsk Province (personal data).

GNAPHOSIDAE

***Drassodes pubescens* (Thorell, 1856)**
Trans-Palaearctic species. Known from Mongolia and various places in Siberia (Mikhailov, 1997).

***Haplodrassus hiemalis* (Emerton, 1909)**
Siberio-American species. Recorded from adjacent Khakassia (Marusik & Logunov, 1995).

***Parasyrisca altaica* Ovtsharenko, Platnick et Marusik, 1995**
Known from Altai (Ovtsharenko et al., 1995).

***Parasyrisca khubsugul* Ovtsharenko, Platnick et Marusik, 1995**
Described from adjacent Mongolia, Khubsugul Aimak (Ovtsharenko et al., 1995).

***Parasyrisca sollers* Simon, 1895**
Known from adjacent Mongolia, Uvs Aimak (personal data).

***Zelotes azsheganovae* Esyunin et Efimik, 1992**
Euro(?)-W Siberian species. Known from adjacent Altai (Marusik et al., 1996)

HAHNIIDAE

***Antistea elegans* (Blackwall, 1841)**
Euro-Yenisei species. Known north and west of Tuva (Mikhailov, 1997)

***Hahnia nava* (Blackwall, 1841)**
Trans-Palaearctic species. Known throughout South Siberia (Mikhailov, 1997).

***Hahnia sibirica* Marusik, Hippa et Koponen, 1996**
Siberian species. Known from adjacent Altai and Krasnoyarsk Province (Marusik et al., 1996).

HETEROPODIDAE

***Micromata virescens* (Clerck, 1758)**
Trans-Palaearctic species. Known throughout South Siberia and Far East (Mikhailov, 1997).

LINYPHIIDAE

***Agyneta alaskensis* (Holm, 1960)**
Siberio-Alaskan species. Known from adjacent areas east, north and south of Tuva (Marusik et al., in press).

***Agyneta similis* (Kulczyński, 1926)**
Common in Siberia (Eskov, 1994) and known in Mongolia (personal data).

***Agyneta mongolica* (Loksa, 1965)**
Mongol-Manchurian species (Eskov, 1994). Known from adjacent Mongolia (¤¤)

***Agyneta parasaxatilis* Marusik, Hippa et Koponen, 1996**
Known from adjacent Altai (Marusik et al., 1996)

***Agyneta serratula* Wunderlich, 1995**
Described from adjacent Mongolia (Wunderlich, 1995).

***Allomengea vidua* (L.Koch, 1879)**
Known in Mongolia and Krasnoyarsk Province (Mikhailov, 1997; Marusik & Logunov, 1998b).

***Bathyphantes jeniseicus* Eskov, 1979**
Siberian species (Eskov, 1994). Known from several adjacent parts of Siberia (Eskov, 1994).

***Bathyphantes reprobus* (Kulczyński, 1916)**
Holarctic species (Eskov, 1994). Known from adjacent parts of Siberia and from Mongolia (Eskov, 1994).

***Centromerus sylvaticus* (Blackwall, 1941)**
Holarctic species. Known throughout Siberia (Eskov, 1994).

***Dicymbium libidinosum* Kulczyński, 1926**
Siberian species. Known in adjacent areas north and east of Tuva (Eskov, 1994).

***Drepanotylus holmi* (Eskov, 1981)**
Siberian species. Known from adjacent Mongolia, Khubsugul Aimak (personal data).

***Gonatium pacificum* Eskov, 1989**
Known from adjacent parts of Siberia and from Mongolia (Eskov, 1994; Marusik et Logunov, 1998b).

***Helophora insignis* (Blackwall, 1841)**
Holarctic species. Known from many parts of Siberia (Eskov, 1994).

***Hybauchenidium ferrumequinum* (Grube, 1861)**
Trans-Palaearctic-Alaskan species. Known from various places in Siberia (Eskov, 1994).

***"Lepthyphantes" alutaceus* Simon, 1884**
Euro-W Siberian species. In Siberia found in Novosibirsk Area (personal data).

***Pseudowubana wagae* (O.P.-Cambridge, 1873)**
Known from various parts of Siberia (Eskov, 1994), including adjacent Mongolia, Khubsugul Aimak (personal data).

***Sisicus apertus* (Holm, 1939)**
Holarctic species. Known from adjacent parts of Siberia (Eskov, 1994).

LIOCRANIDAE

***Phrurolithus festivus* (C.L. Koch, 1835)**
Trans-Palaearctic species. Common in South Siberia (Mikhailov, 1997).

LYCOSIDAE

***Acantholycosa azyuzini* Marusik, Hippa et Koponen, 1996**
Described from adjacent Altai (Marusik et al., 1996)

Hygrolycosa rubrofasciata (Ohlert, 1865)
Euro-Yenisei species. Known from middle Yenisei and adjacent Altai (Mikhailov, 1997; personal data).

Pardosa adustella (Roewer, 1951)
Siberian species. Known from adjacent Mongolia, Khubsugul Aimak (personal data).

***Pardosa lyrata* (Odenwall, 1901)**
Known from various parts of Siberia (Mikhailov, 1997), including adjacent Mongolia, Khubsugul Aimak (personal data).

***Pirata piraticus* (Clerck, 1758)**
Widespread in Holarctic and known in adjacent areas.

PHILODROMIDAE

***Philodromus aryy* Marusik, 1991**
Known east and west of Tuva (personal data).

***Philodromus buxi* Simon, 1884**
Trans-Palaearctic species. Known from several parts of Siberia (Mikhailov, 1997).

***Philodromus vinokurovi* Marusik, 1991**
Middle Siberian species. Known in Cisbaikalia and Yakutia (personal data).

***Thanatus dahurianus* Logunov, 1997**
Described from southern Transbaikalia.

PISAURIDAE

***Pisaura mirabilis* (Clerck, 1758)**
Euro-Altaian species. Known from Altai (Marusik et al., 1996), may occur in western Tuva.

SALTICIDAE

***Aelurillus v-insignitus* (Clerck, 1758)**
Trans-Palaearctic species. Known from several parts of Siberia (Mikhailov, 1997; personal data).

***Asianellus potanini* (Schenkel, 1963)**
Siberio-Manchurian species. Widespread in Siberia including adjacent parts of Mongolia (Logunov & Hęciak, 1996; personal data).

***Heliophanus chovdensis* Prószyński, 1981**
Described from western Mongolia.

***Marpissa pomatia* (Walckenaer, 1802)**
Trans-Palaearctic species. Known from various parts of Siberia (Mikhailov, 1997).

***Synageles nigriculus* Danilov, 1997**
Occurs in Buryatia and Amur Area (Danilov, 1997)

***Pellenes logunovi* Marusik, Hippa et Koponen, 1996**
Described from adjacent Altai (Marusik et al., 1996).

THERIDIIDAE

***Crustulina guttata* (Wider, 1834)**
Known west and east of Tuva (Mikhailov, 1997).

***Euryopis flavomaculata* (C.L.Koch, 1836)**
Trans-Palaearctic species. Known in adjacent parts of Siberia (Mikhailov, 1997; personal data).

***Steatoda castanea* (Clerck, 1757)**
Synanthropic species, common in Siberia.

***Steatoda grossa* (C.L. Koch, 1838)**
Synanthropic species, common in Siberia (Mikhailov, 1997).

THOMISIDAE

***Tmarus piger* (Walckenaer, 1802)**
Trans-Palaearctic species. Known from adjacent parts of Siberia (Mikhailov, 1997).

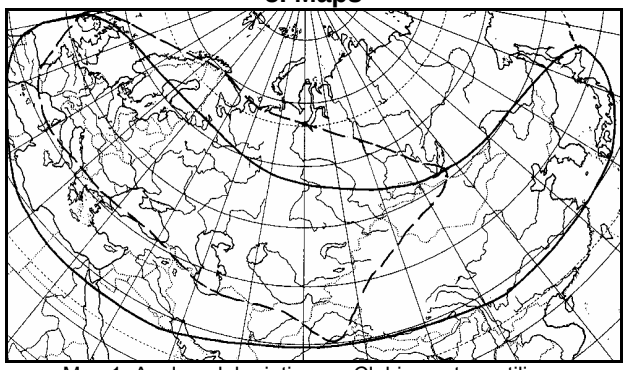
***Xysticus idolothytus* Logunov, 1995**
Described from adjacent Mongolia, Khubsugul Aimak.

***Xysticus robustus* (Hahn, 1832)**
Euro-Altaian species. Known from Altai (Marusik et al., 1996)

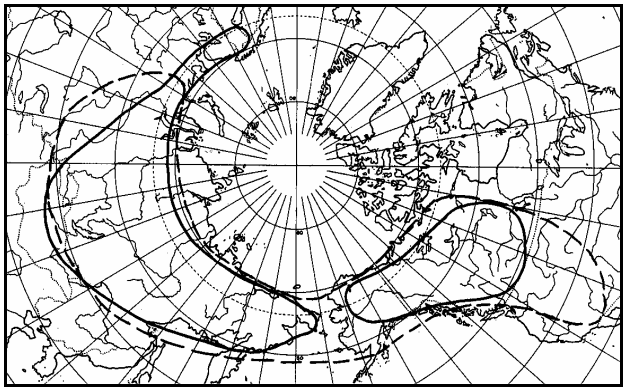
TITANOECIDAE

***Titanoeca schineri* L. Koch, 1872**
Palaearctic species. Known in adjacent Middle Siberia (Holm, 1973).

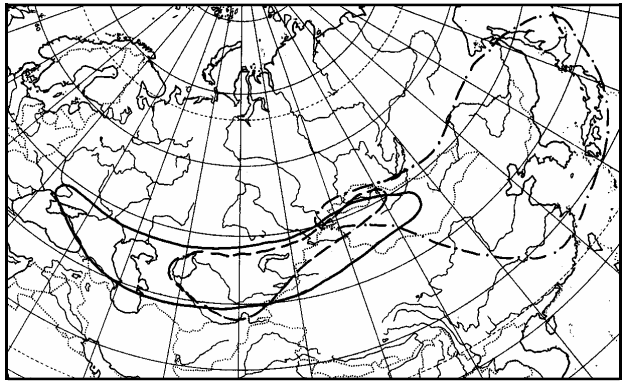
5. Maps



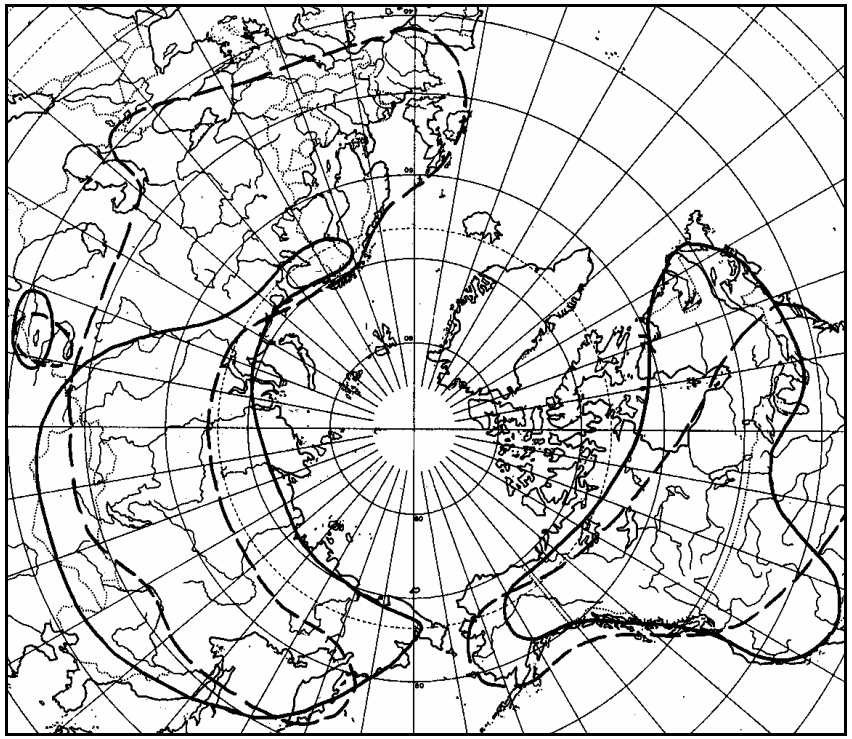
Map 1. Agelena labyrintica —, Clubiona stagnatilis - -



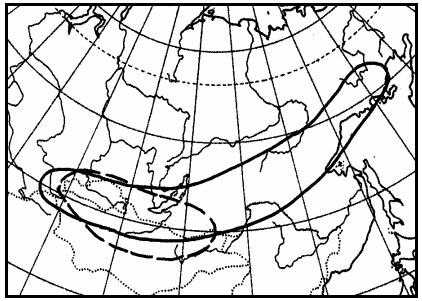
Map 2. Arctobius agelenoides –, Aculepeira carbonarioides - -



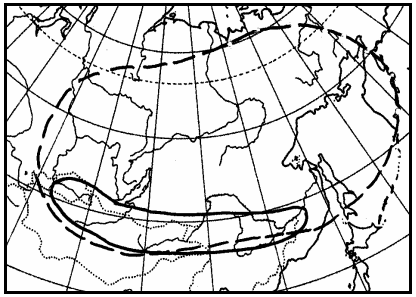
Map 3. “Araneus” pallasi —, “A.” strandiellus - -, Araniella yaginumai -·-



Map 4. Aculepeira packardi —, Araneus marmoreus –



Map 5. Aculepeira cf. carbonarioides —, Araneus cf. saevus - -



Map 6. Larinia bossae —, Clubiona interjecta - --

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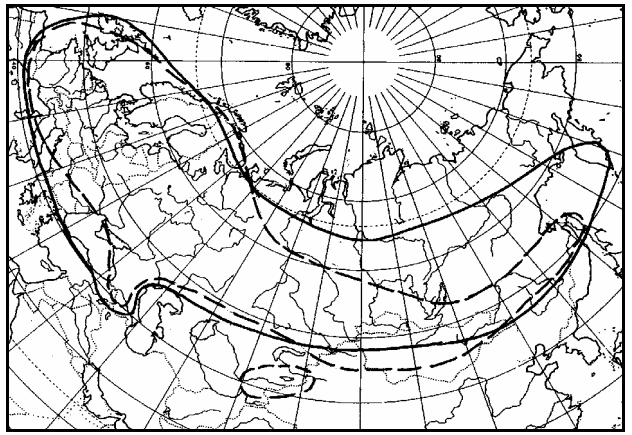
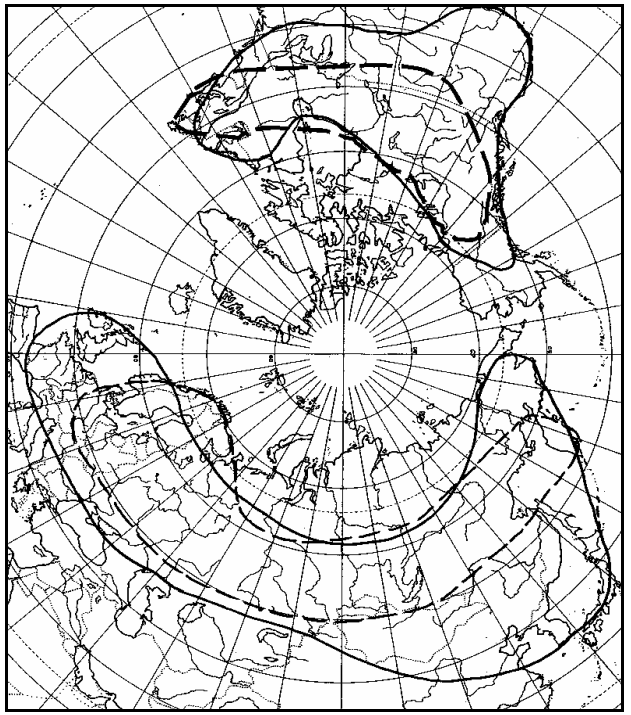
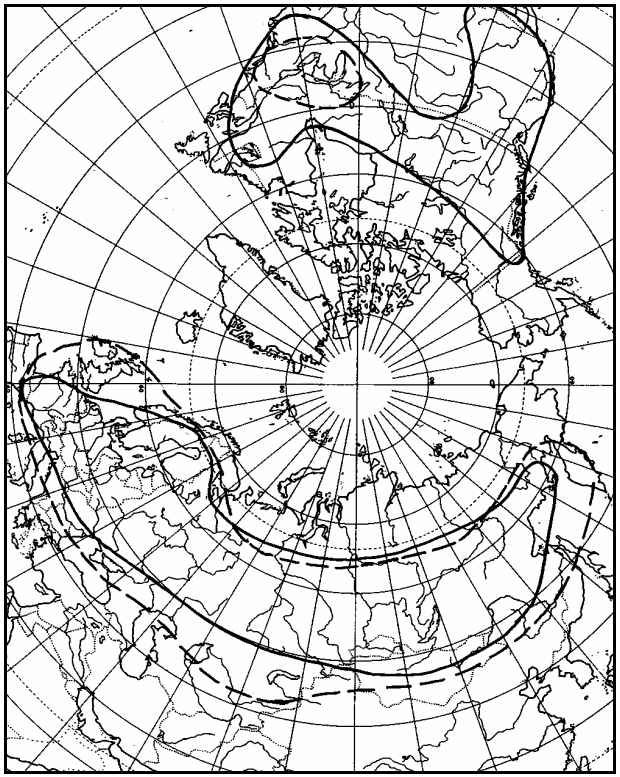


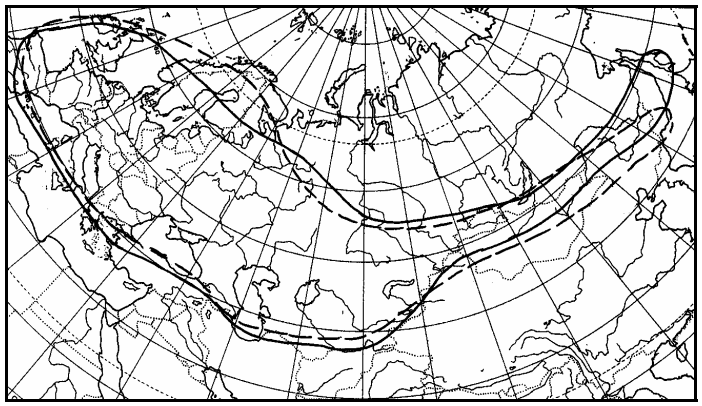
Map 7. Araneus alsine —, Araneus quadratus - -



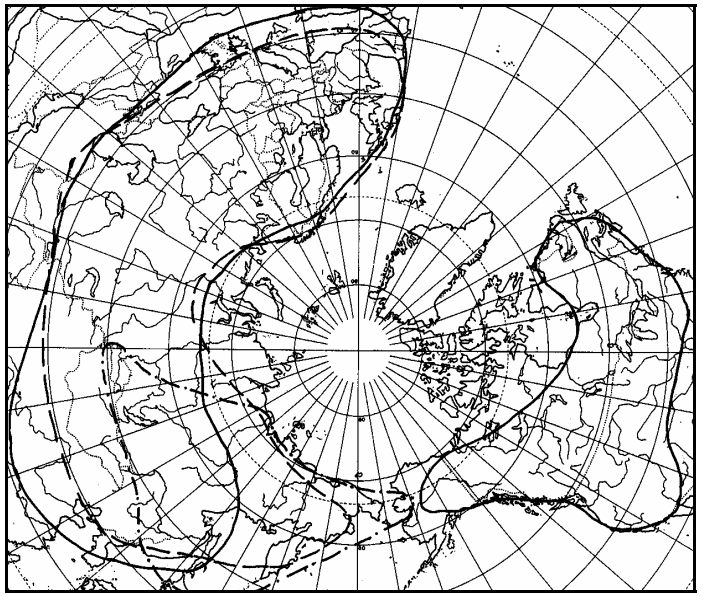
Map 8. Araniella displicata —, Araniella proxima - -



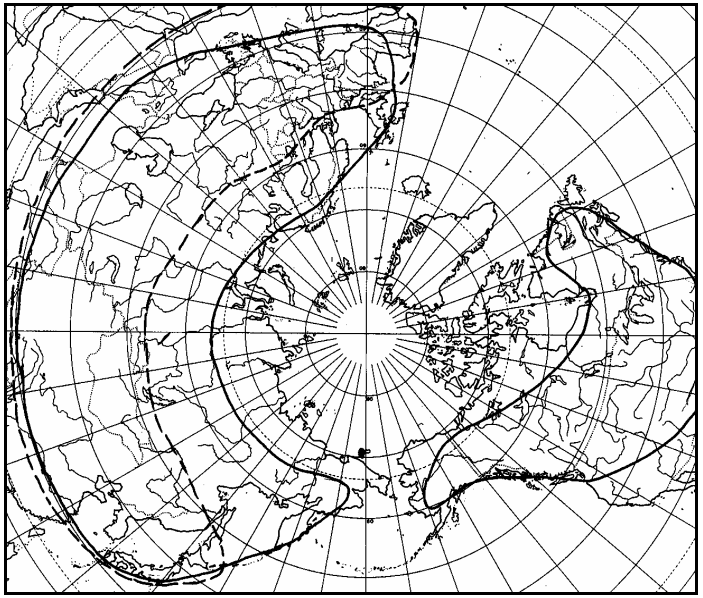
Map 9. Araneus nordmanni —, Cercidia prominens - -



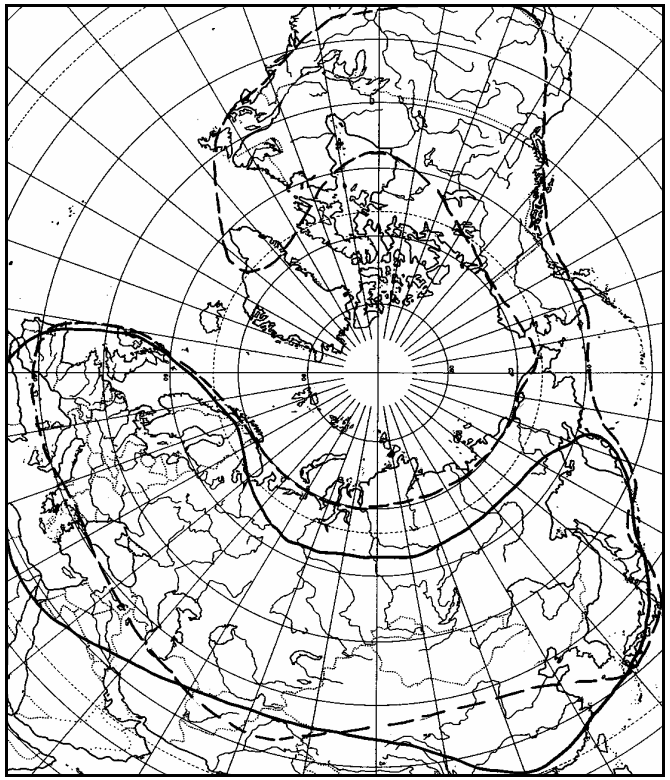
Map 10. Singa nitidula —, “Zygiella” stroemi - -



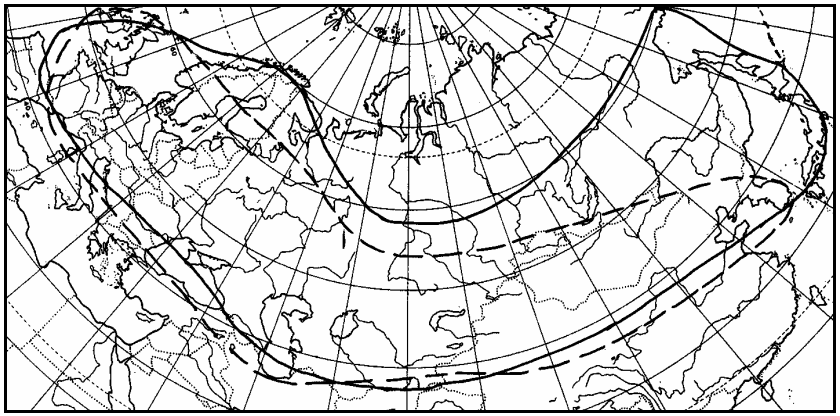
Map 11. Cyclosa conica —, Hypsosinga albovittata - -, Clubiona latericia -·-



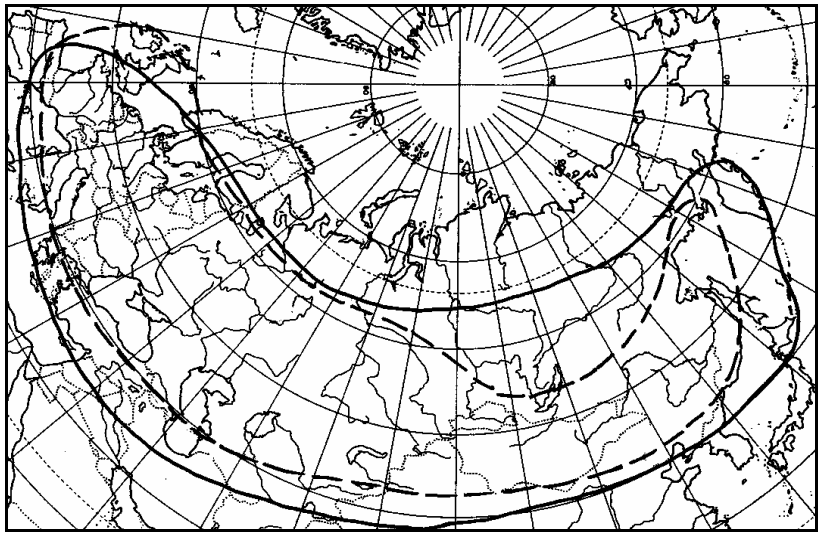
Map 12. Hypsosinga pygmaea —, Neoscona adianta - -



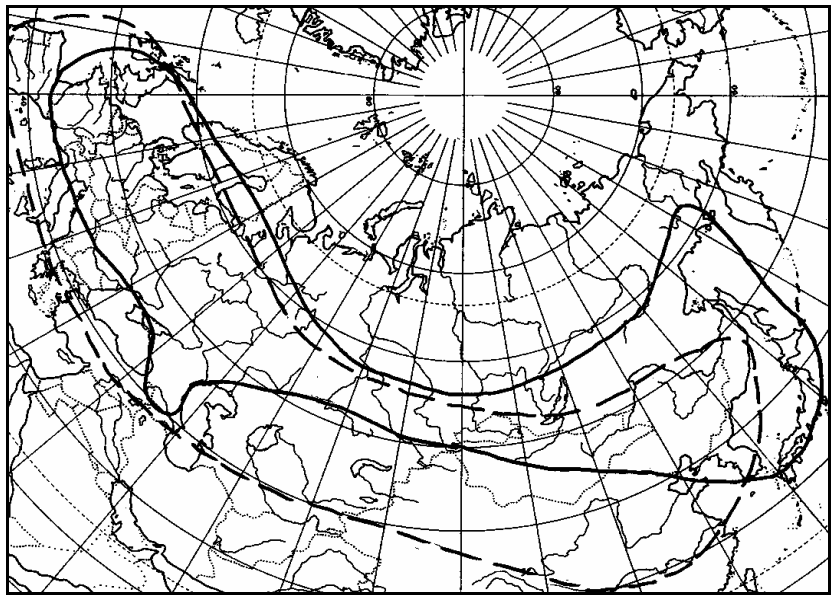
Map 13. Hypsosinga sanguinea —, Larinioides patagiatus - -



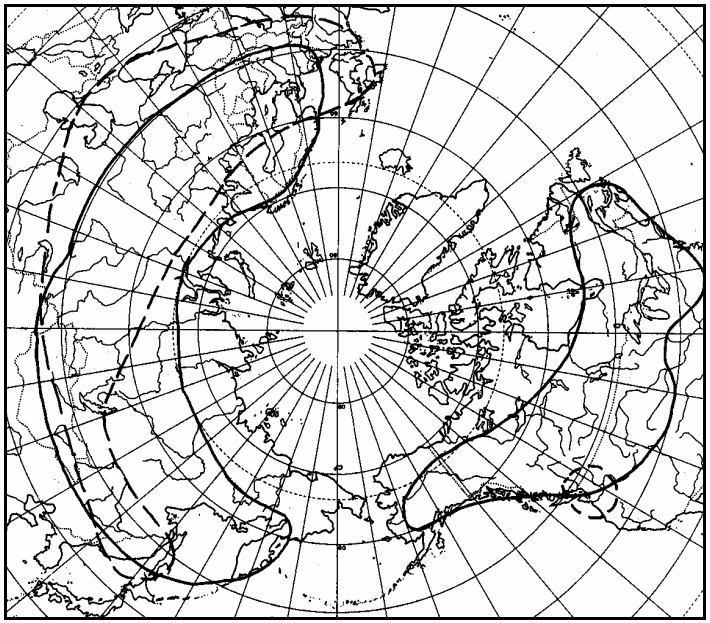
Map 14. Argyrneta aquatica —, Clubiona phragmitis - -



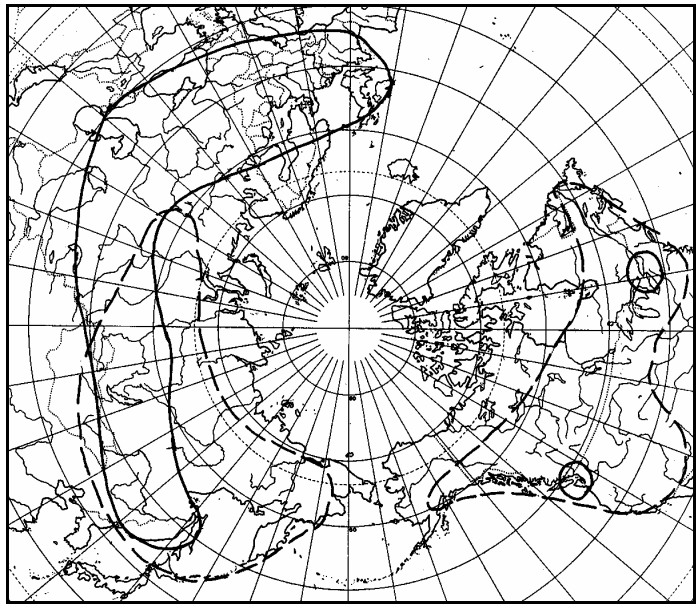
Map 15. Cheiracanthium erraticum —, Clubiona caerulescens - -



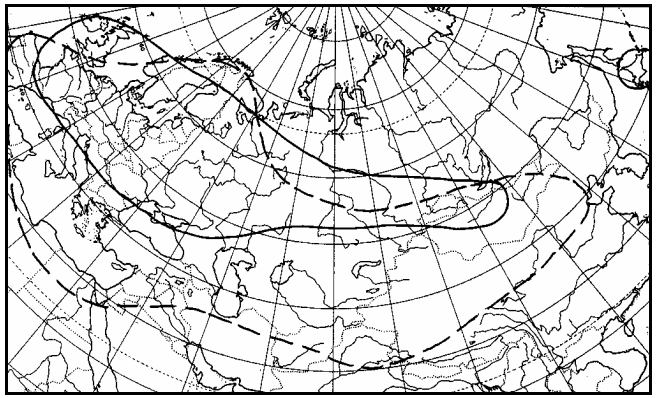
Map 16. Clubiona diversa —, Clubiona neglecta - -



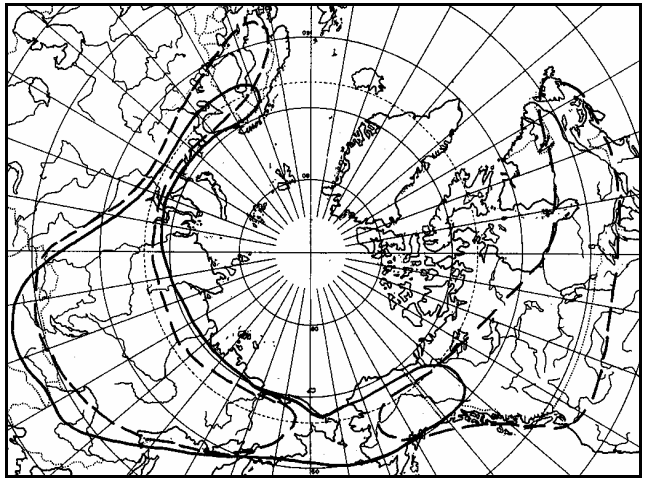
Map 17. Clubiona kulczynskii —, Clubiona lutescens - -



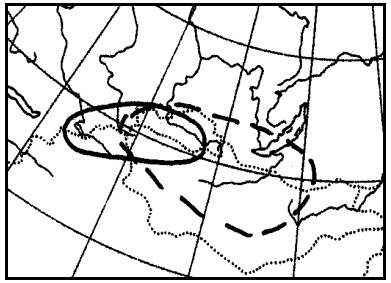
Map 18. Clubiona pallidula —, Clubiona riparia - -



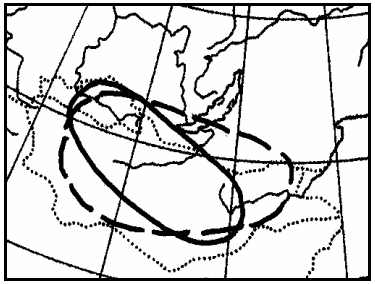
Map 19. Clubiona subsultans —, Archaeodictyna consecuta - -



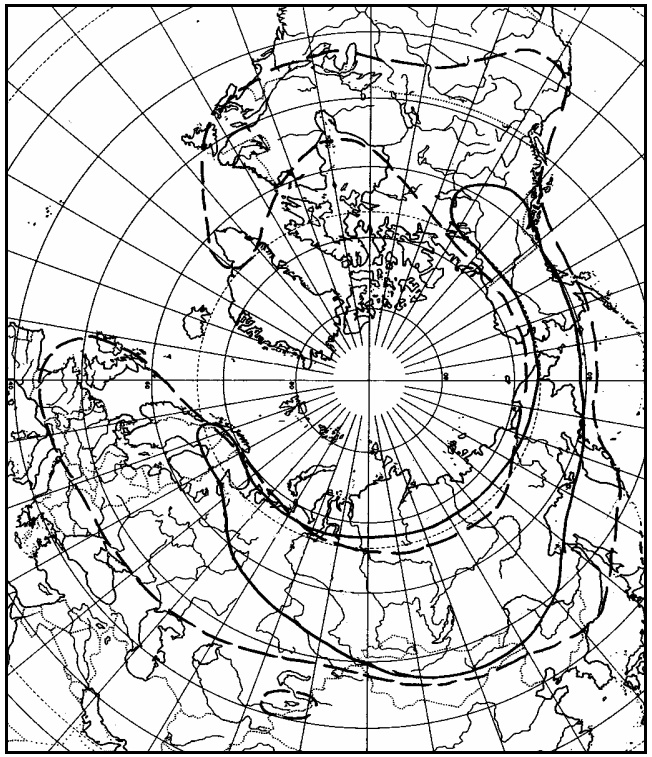
Map 20. Arctella lapponica —, Dictyna alaskae - -



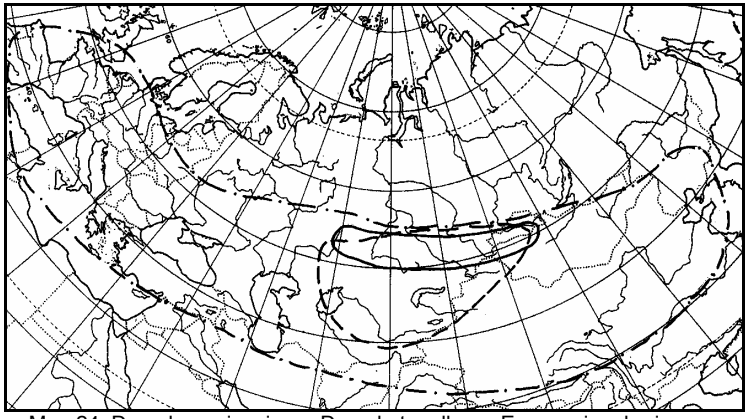
Map 21. Clubiona pseudosaxatilis —, Dictyna sotnik - -



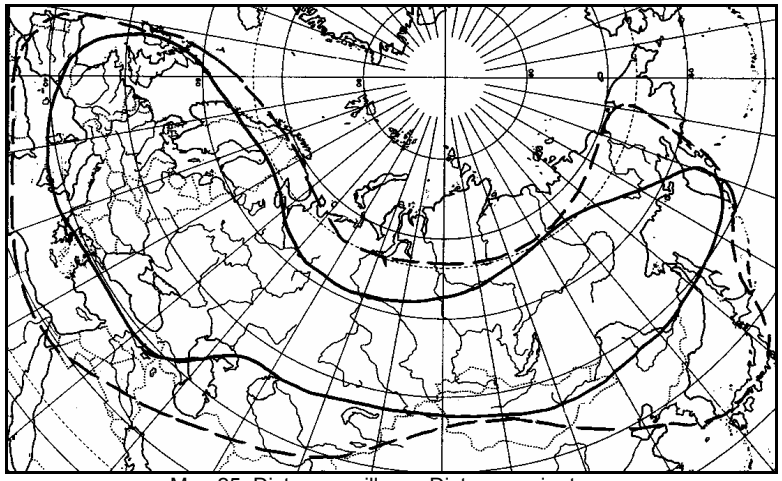
Map 22. Emblyna logunovi —, E. mongolica - -



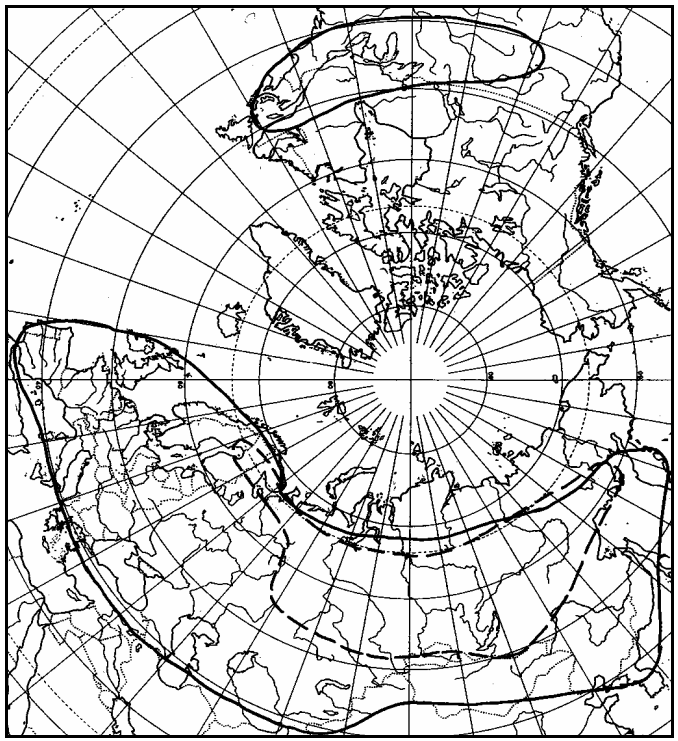
Map 23. Argenna prominula —, Dictyna major - -



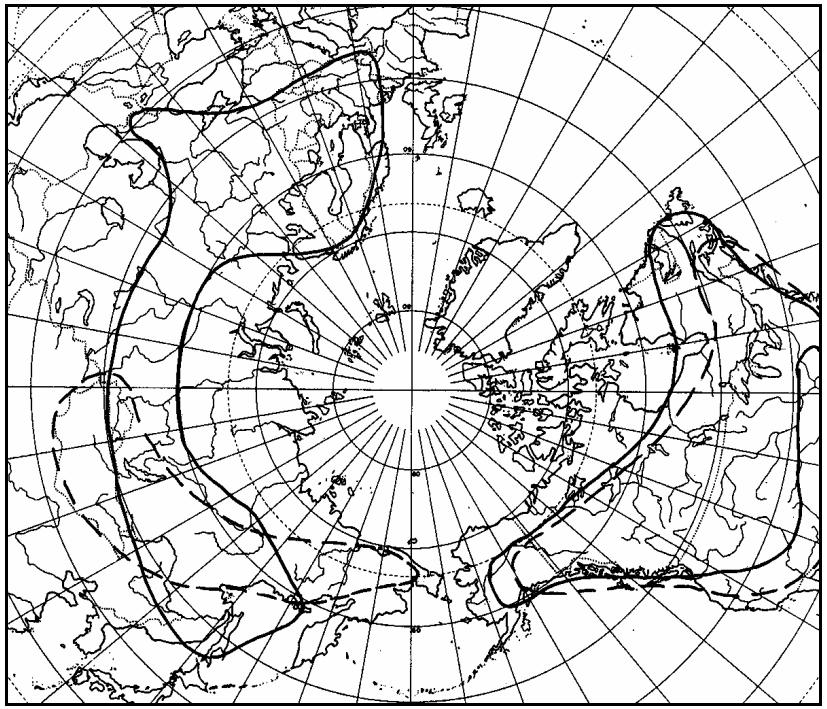
Map 24. Devade u. uiensis —, Devade tenella - -, Eresus cinnaberinus -·-



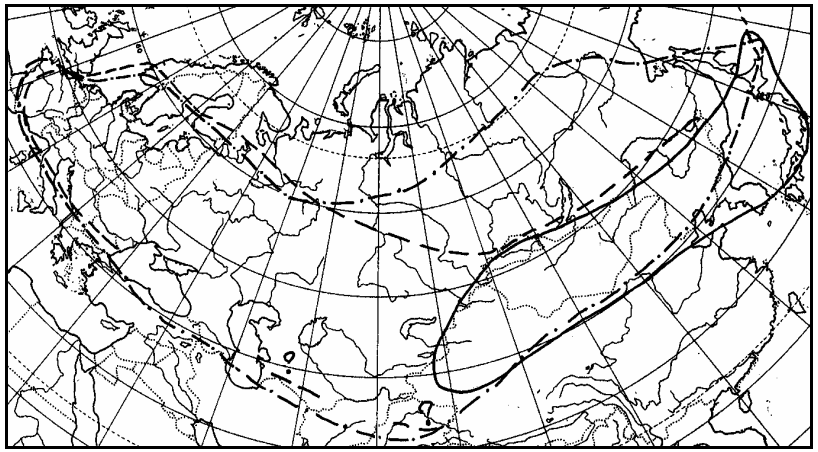
Map 25. Dictyna pusilla —, Dictyna uncinata - -



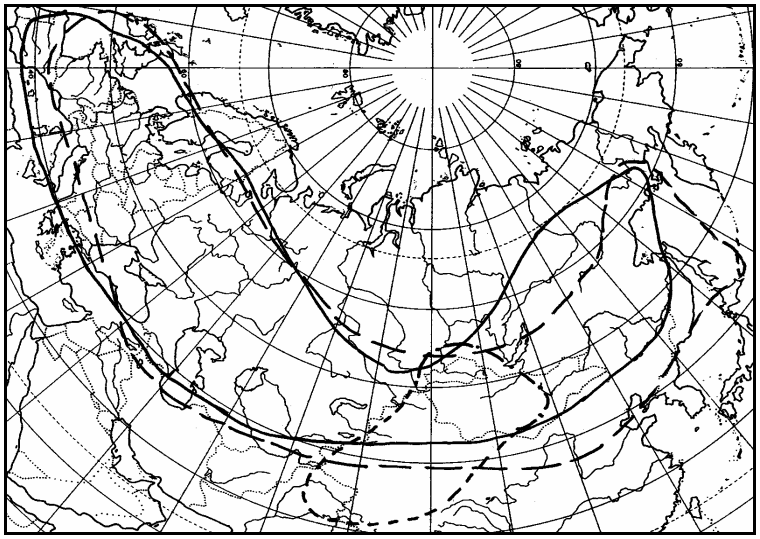
Map 26. Dictyna arundinacea —, Dictyna cf. schmidti - -



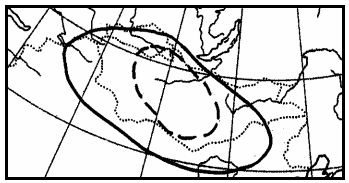
Map 27. Emblyna annulipes —, Drassodes neglectus - -



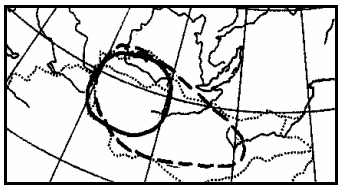
Map 28. Drassodes serratidens —, D. villosus - -, Drassyllus pusillus -··



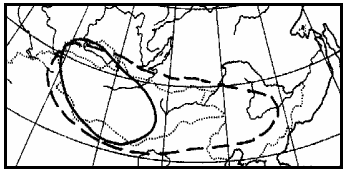
Map 29. Callilepis nocturna —, Drassodes cupreus - -, D. pseudolesserti -··



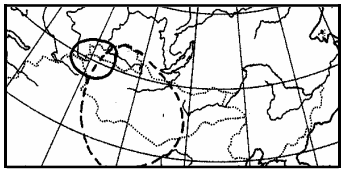
Map 30. Berlandina potanini —, B. ubsunurica - -



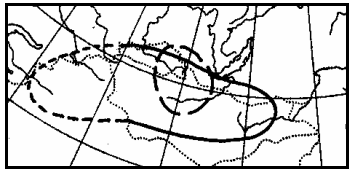
Map 31. Gnaphosa tuvinica —, Micaria mongunica - -



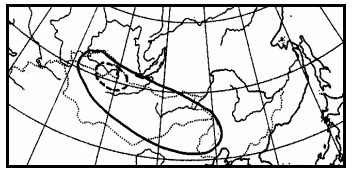
Map 32. Drassodes kaszabi —, D. lesserti - -



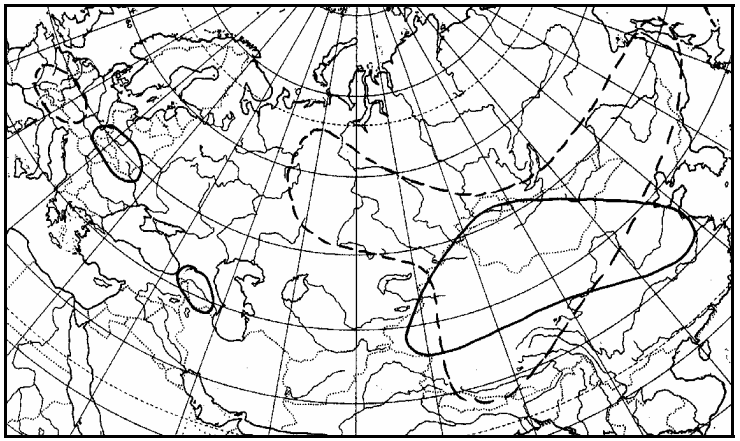
Map 33. Parasyrisca asiatica —, P. potanini - -



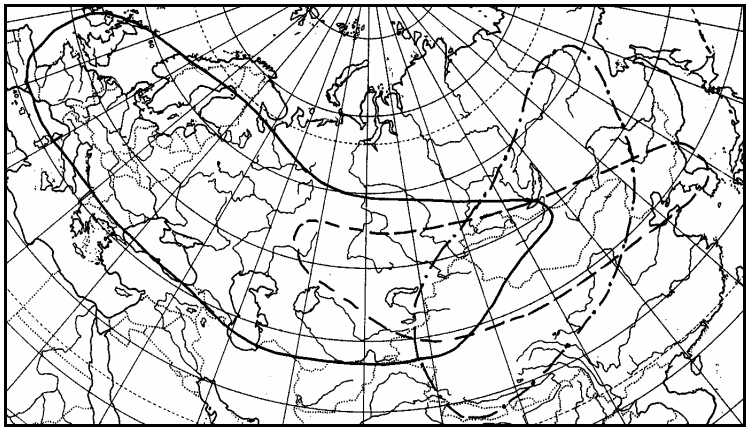
Map 34. Drassodes longispinus — & - -, Parasyrisca ulykpani – –



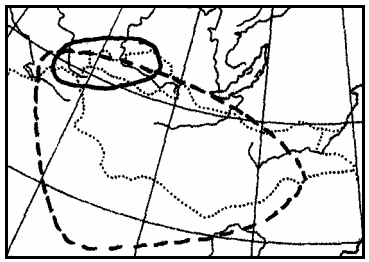
Map 35. Micaria tuvensis —, Parasyrisca belengish - -



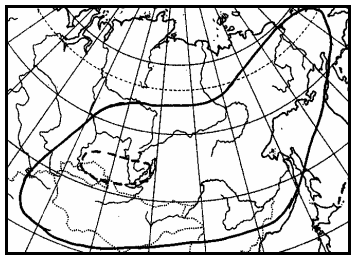
Map 36. Drassyllus vinealis —, Gnaphosa inconspecta - -



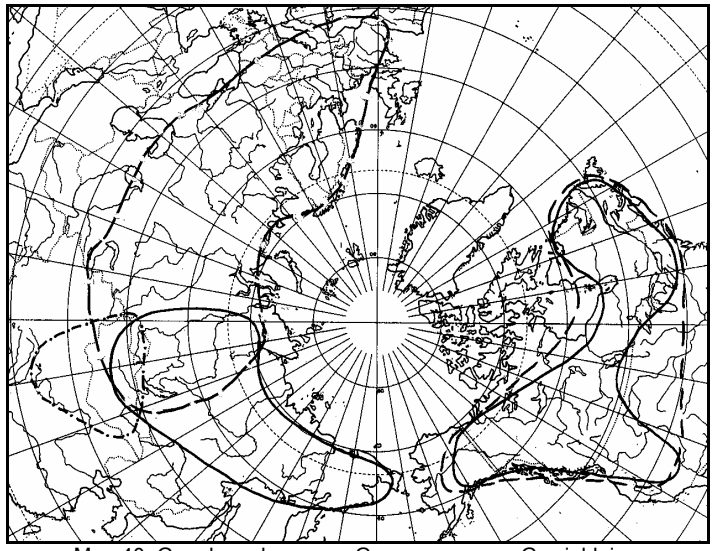
Map 37. Gnaphosa leporina —, G. licenti - -, G. mandschurica -·-



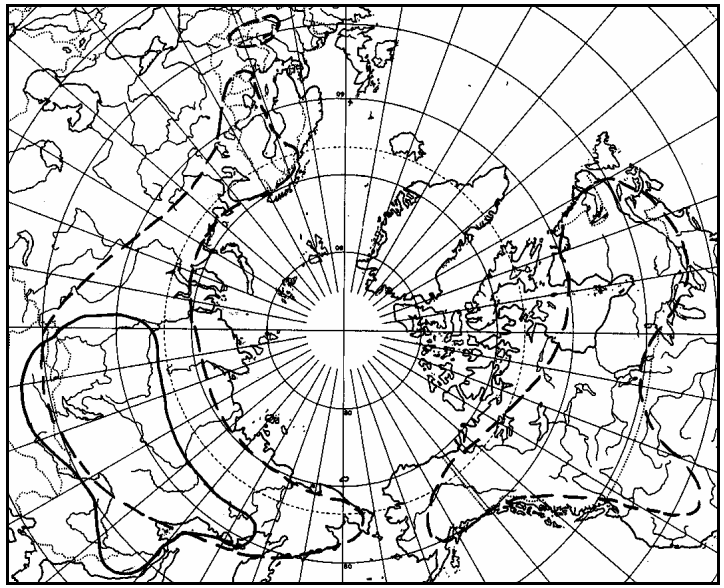
Map 38. Parasyrisca hippai —, P. schenkeli - -



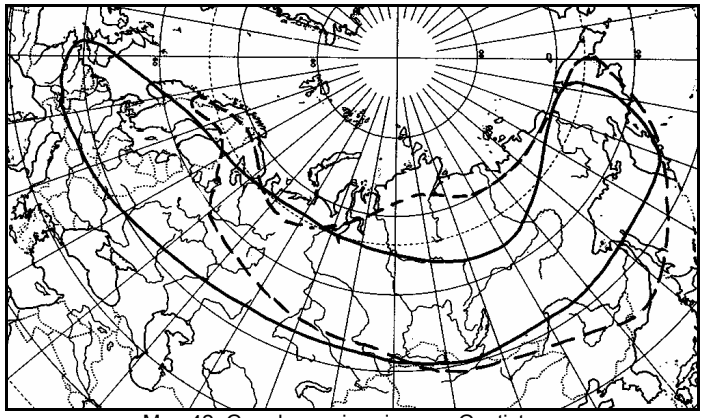
Map 39. Gnaphosa gracilior —, G. pseudoleporina - -



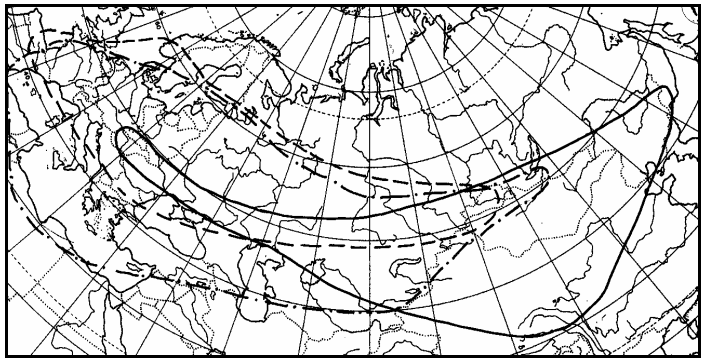
Map 40. Gnaphosa borea —, G. muscorum - -, G. wiehlei -·-



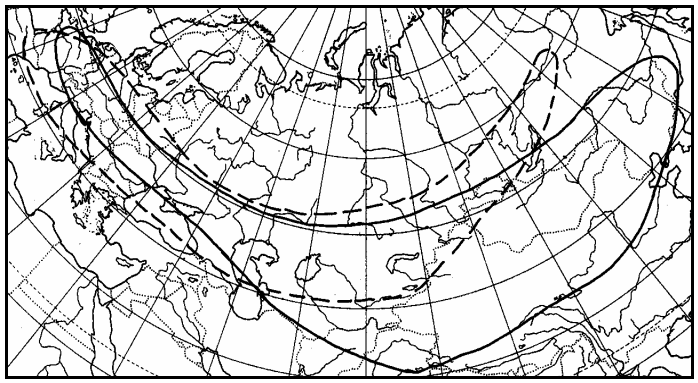
Map 41. Gnaphosa chola —, G. microps - -



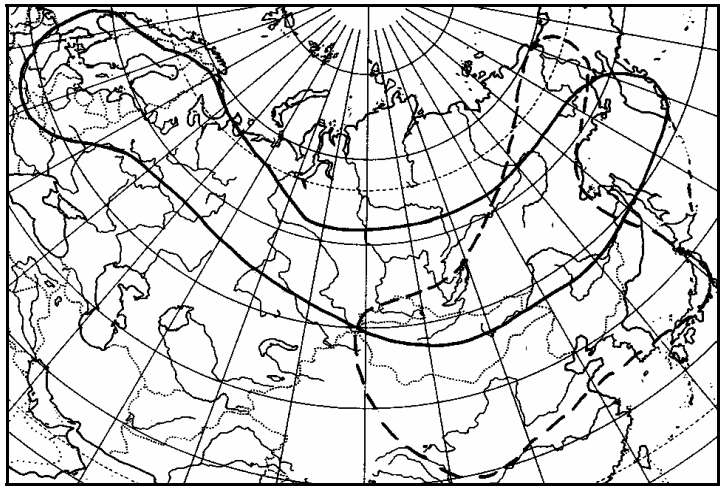
Map 42. Gnaphosa nigerrima —, G. sticta - -



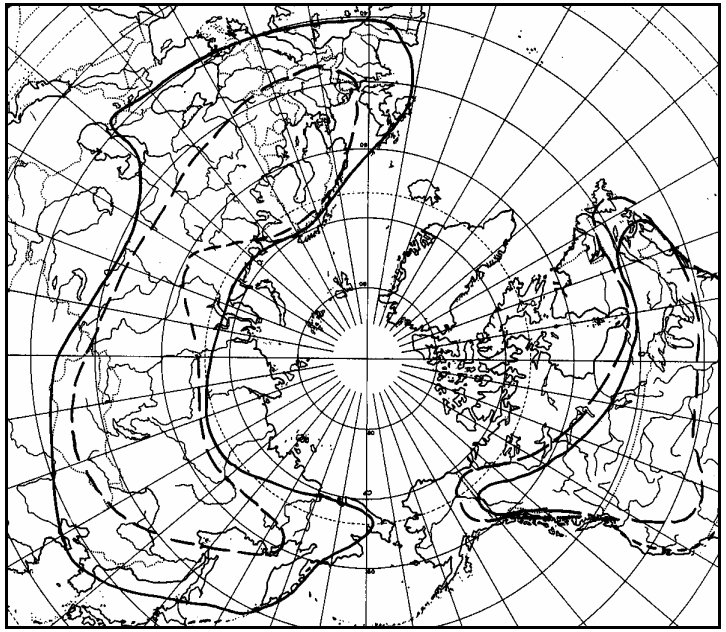
Map 43. Gnaphosa mongolica —, Haplodrassus cognatus - -, Micaria fulgens -·-



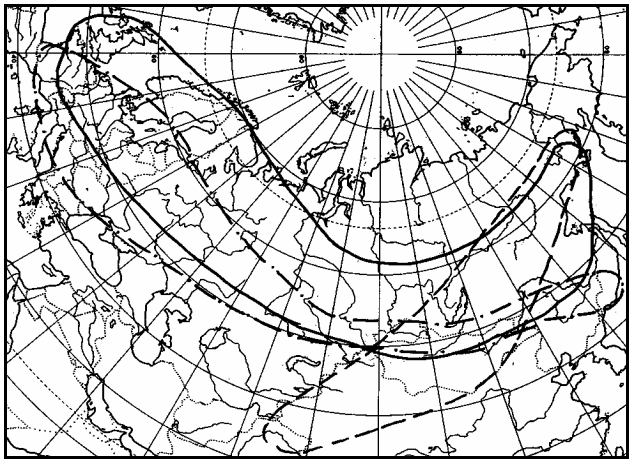
Map 44. Micaria dives —, M. guttulata - -



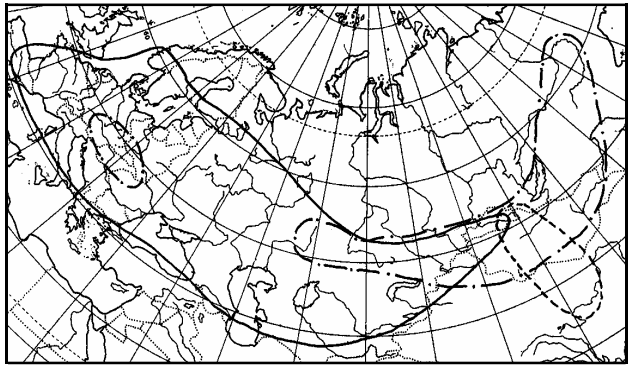
Map 45. Haplodrassus moderatus —, H. pugnans - -



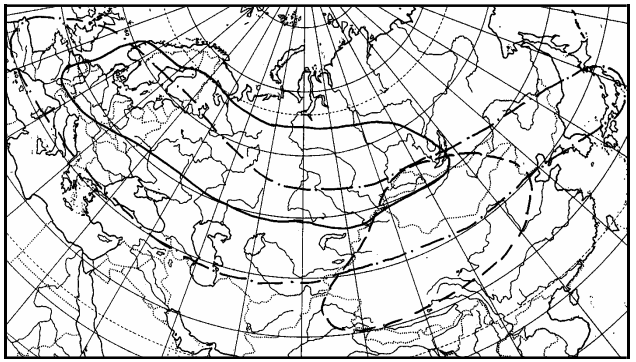
Map 46. Haplodrassus signifer — & ?- -, Micaria aenea – –



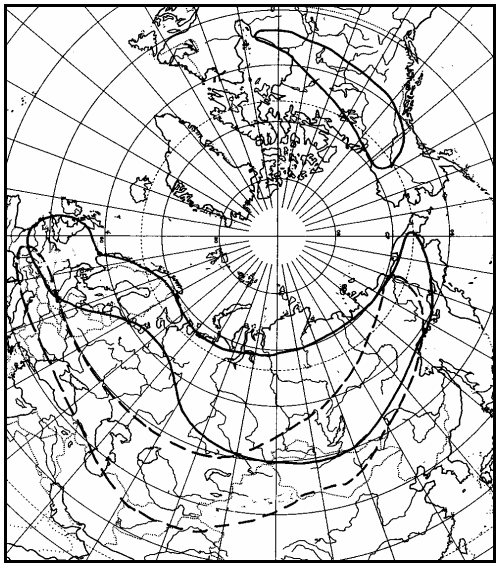
Map 47. Haplodrassus soerenseni —, Zelotes baltistanus - -, Z. exiguus -·-



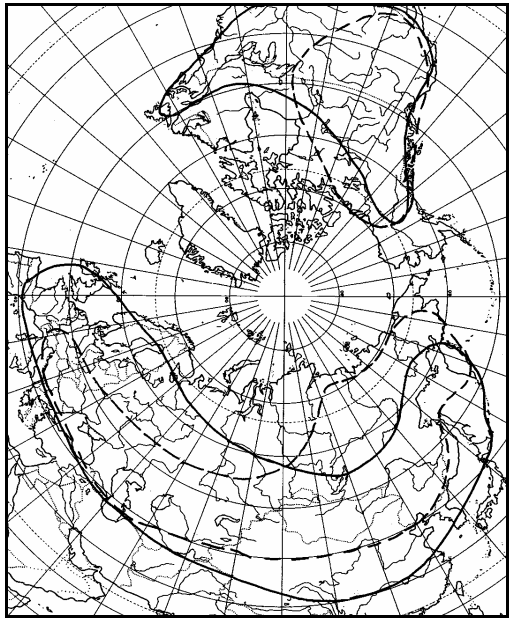
Map 48. Poecilochroa variana —, Tuvadrassus tegulatus - -, Urozelotes yutian -·-



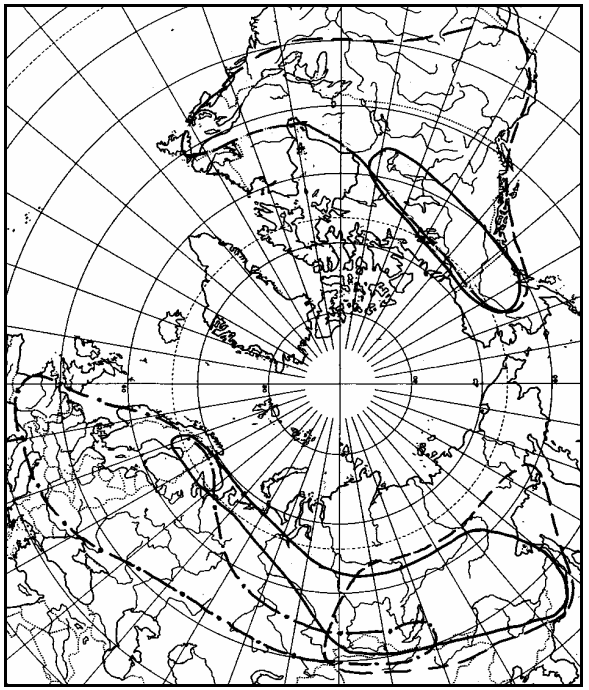
Map 49. Micaria nivosa —, M. pulcherrima - -, Phaeocedus braccatus -·-



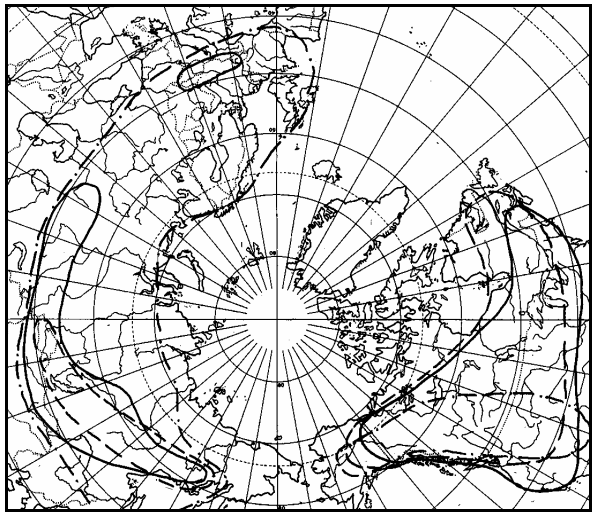
Map 50. Micaria alpina —, M. lenzi - -



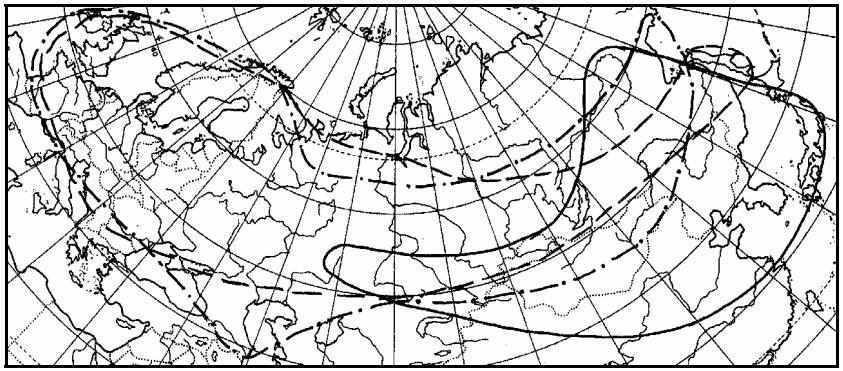
Map 51. Micaria pulicaria —, M. rossica - -



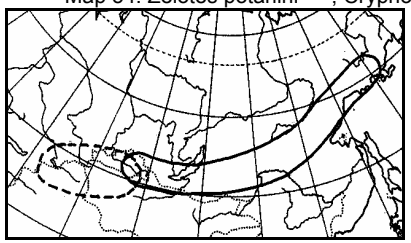
Map 52. Micaria tripunctata —, Zelotes fratris - -, Abacoproeces saltuum -·-



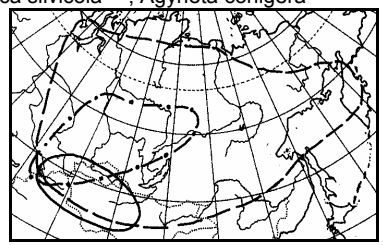
Map 53. Zelotes puritanus —, Z. sula - -, Hahnia ononidum -·-



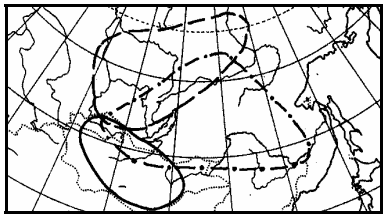
Map 54. Zelotes potanini —, Cryphoeca silvicola - -, Agyneta conigera -·-



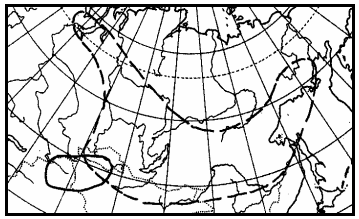
Map 55. Parasyrisca tyshchenkoi —, Zelotes barkol - -



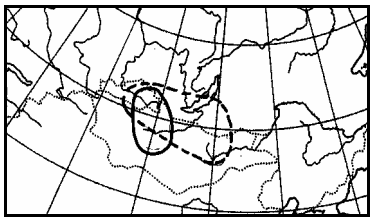
Map 56. Agyneta pseudosaxatilis - -, A. kaszabi —, Anguliphantes cerinus -·-



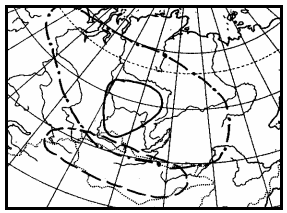
Map 57. Agyneta birulaioides —, A. levii - -, Asiophantes sibiricus -·-



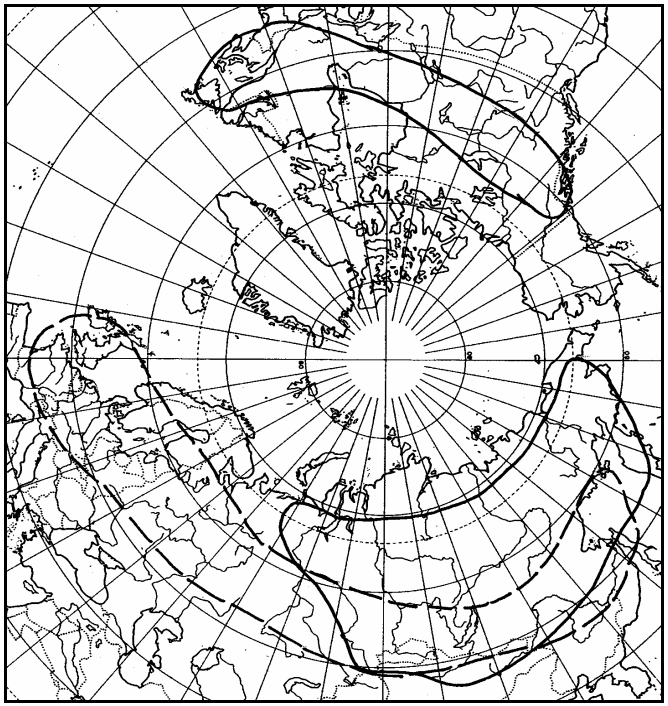
Map 58. Bishopiana glumacea —, Dicymbium facetum - -



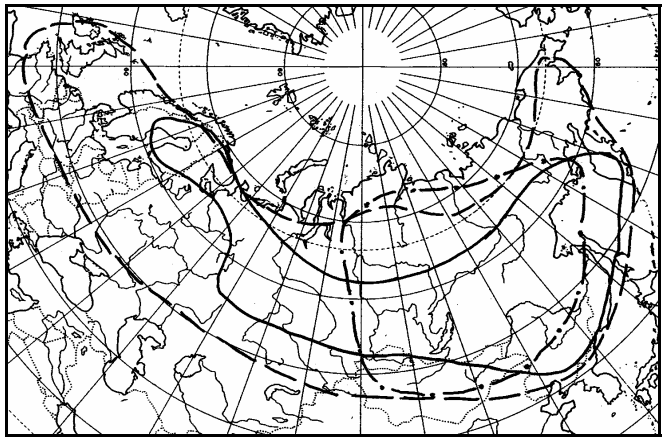
Map 59. Episolder finitimus —, Erigonoplus sibicus - -



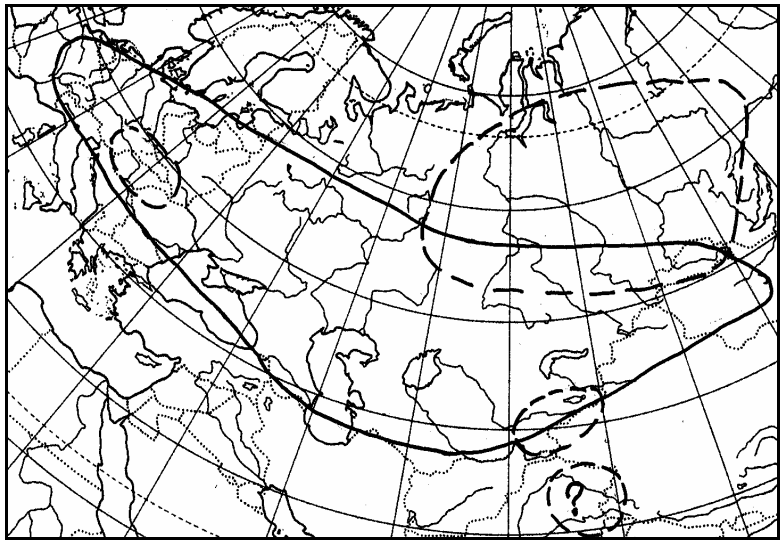
Map 60. Anguliphantes sibiricus —, Arachosinella oeroegensis - -, Araeoncus vorkutensis -·-



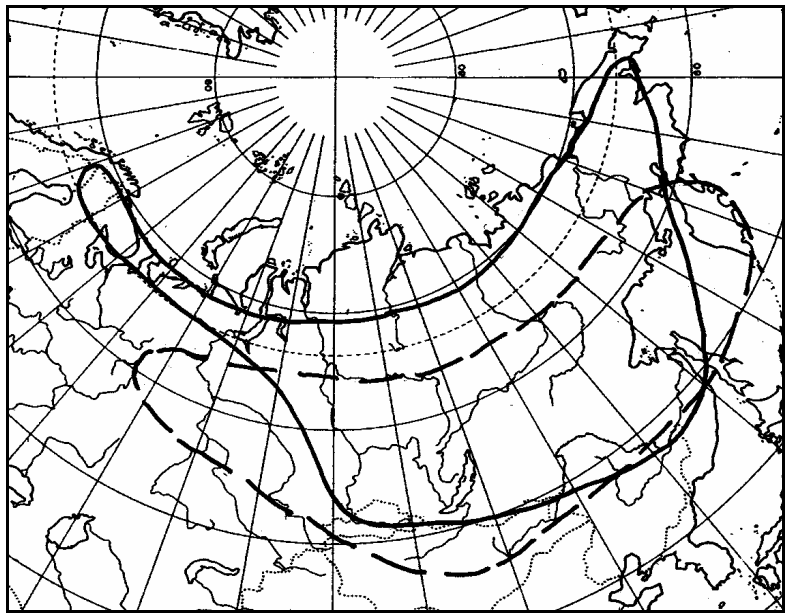
Map 61. Agyneta allosubtilis —, A. beata - -



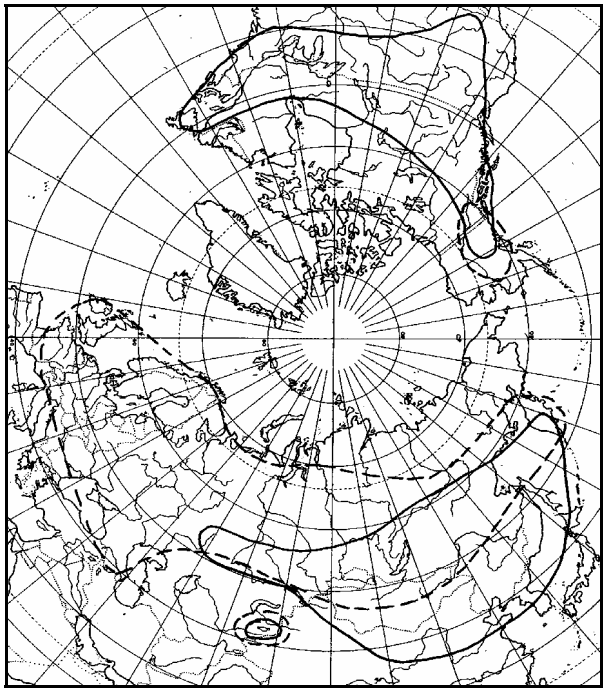
Map 62. Abiskoa abiskoensis —, Agnyphantes expunctus - -, Agyneta affinisoides -·-



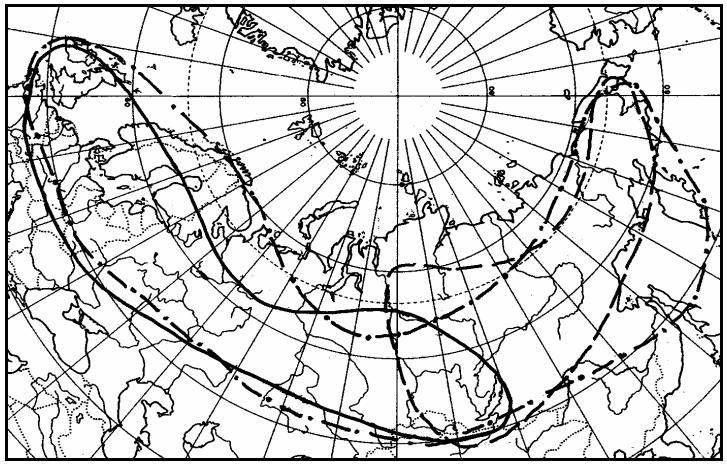
Map 63. Agyneta fuscipalpis —, Collinsia caliginosa - -



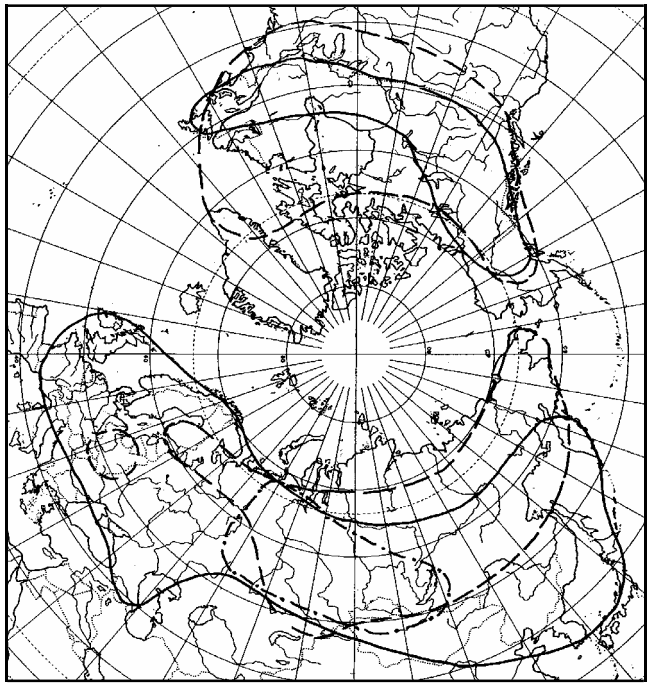
Map 64. Agyneta trifurcata —, Anguliphantes dybowskii - -



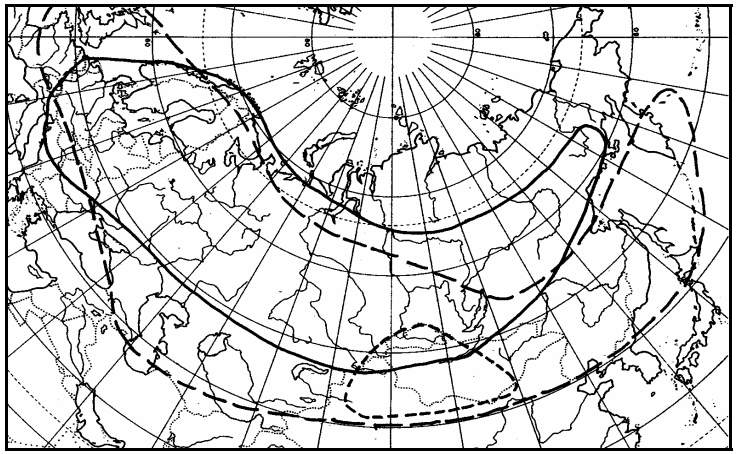
Map 65. Allomengea dentisetis —, A. scopigera - -



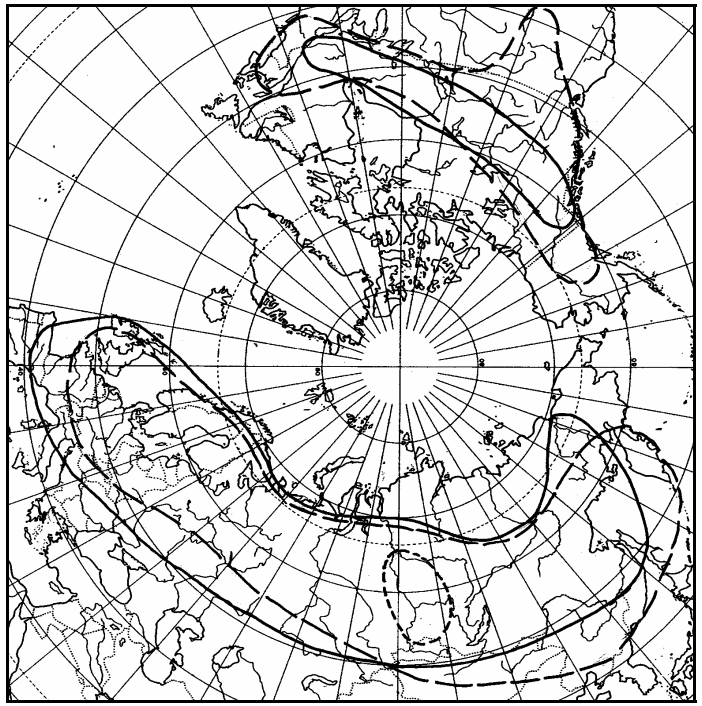
Map 66. Araeoncus crassiceps —, Archaraeoncus sibiricus - -,
Bathyphantes setiger -·-



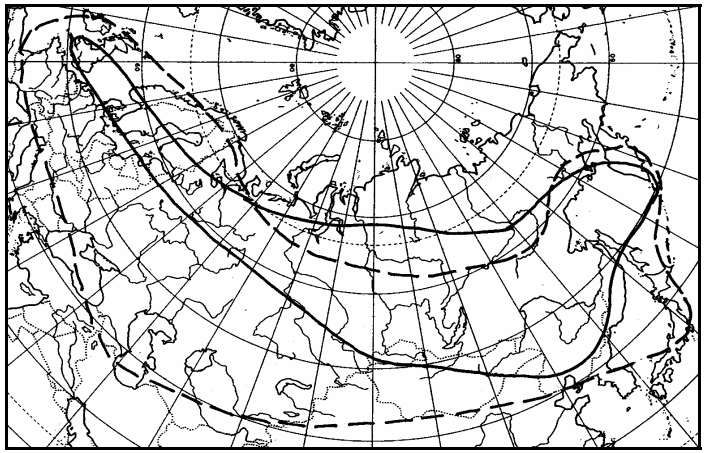
Map 67. Bathyphantes gracilis —, B. simillimus - -, Centromerus clarus -·-



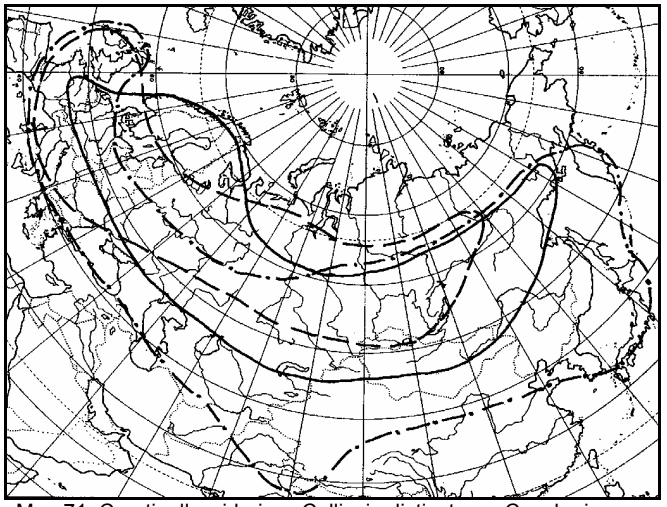
Map 68. Bolephtyphantes index —, Bolyphantes alticeps - -, Dactilopistes diphyus -·-



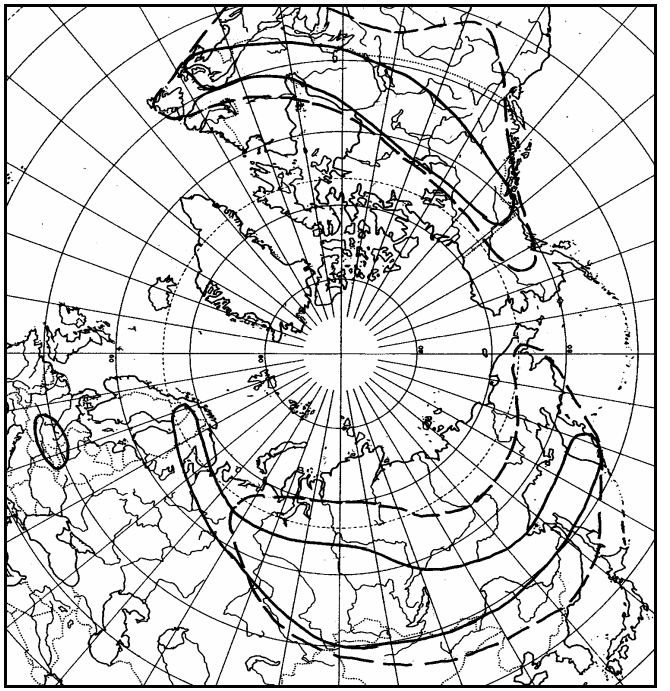
Map 69. Cnephalocotes obscurus —, Diplocentria bidentata – –, Diplocephalus cristatus angusticeps -·-



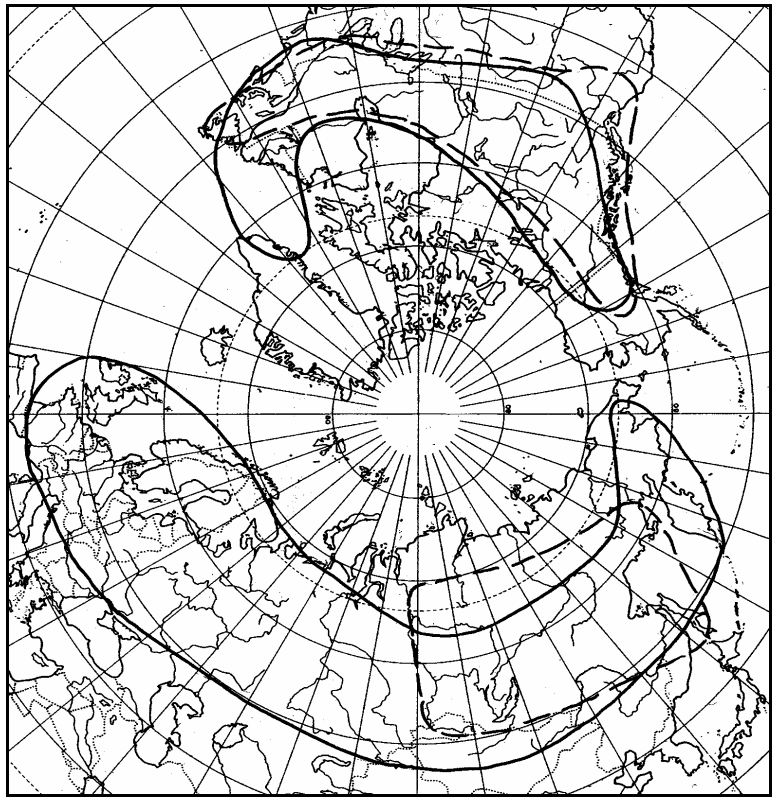
Map 70. Carorita limnaea —, Ceratinella brevis - -



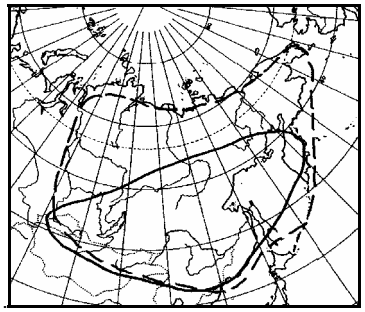
Map 71. Ceratinella wideri —, Collinsia distincta - -, C. submissa -·-



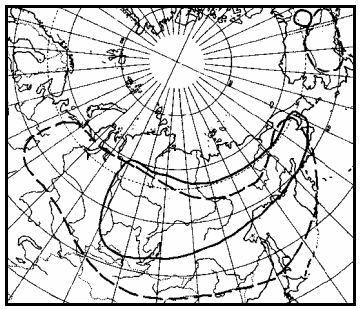
Map 72. Diplocentria rectangulata —, Diplocephalus subrostratus - -



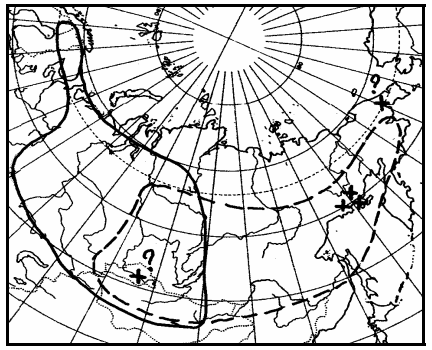
Map 73. Dismodicus bifrons —, Entelecara sombra - -



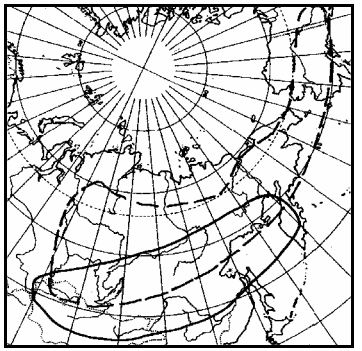
Map 74. Anguliphantes karpinskii —, Bathyphantes eumenis - -



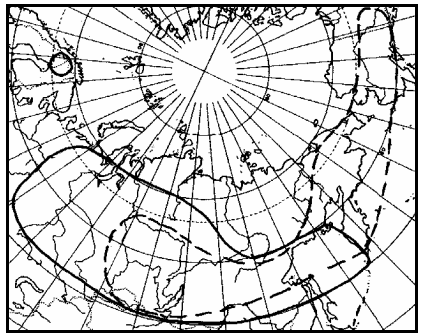
Map 75. Collinsia dentata —, Dactilopistes video - -



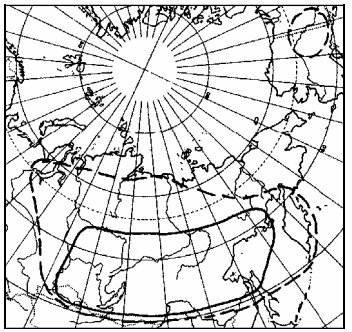
Map 76. Decipiphantes decipiens —, Dilpocephalus marusiki ++, Hilaira minuta - -



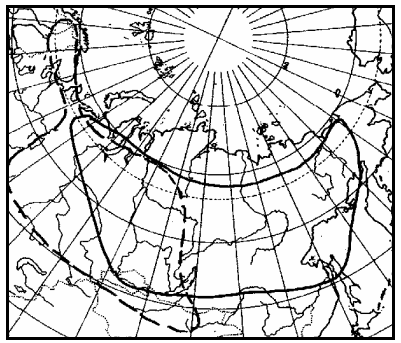
Map 77. Hilaira mongolica —, H. sibirica - -



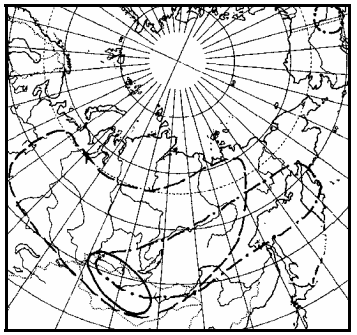
Map 78. Drepanotylus borealis —, Hilaira frigida intercepta - -



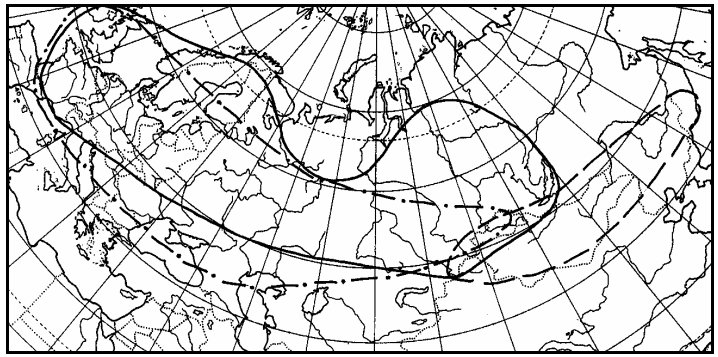
Map 79. Holminaria prolata —, Hypselistes semiflavus - -



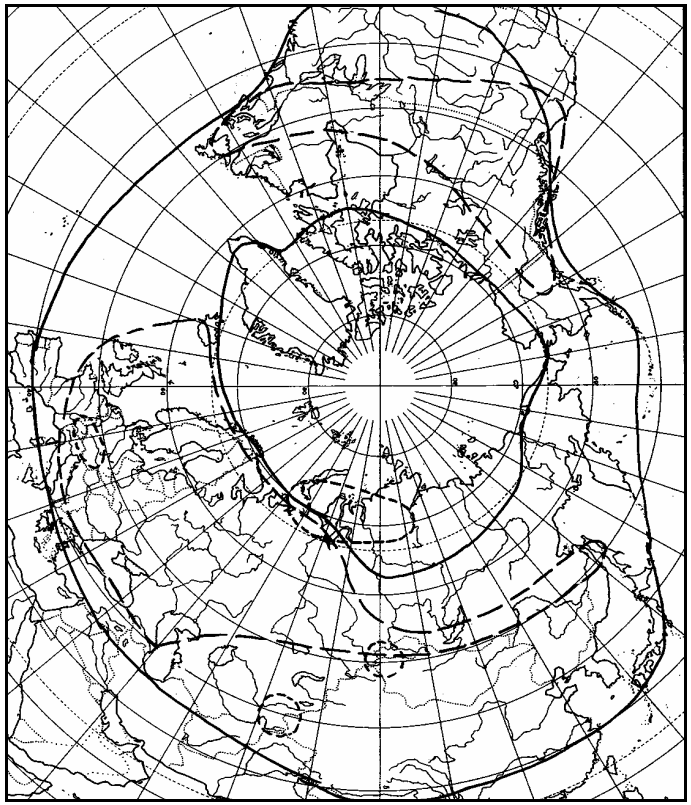
Map 80. Erigone hypoarctica —, Flagelliphantes bergstroemi - -



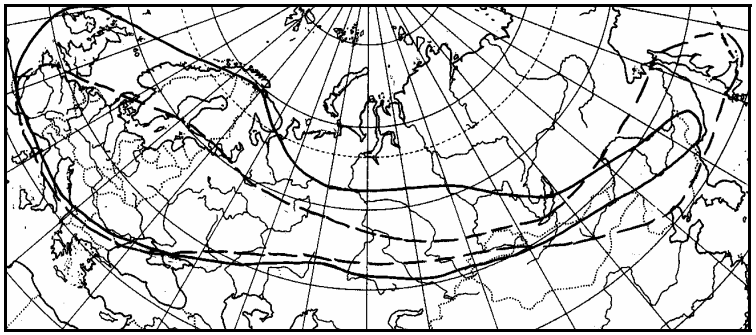
Map 81. Incestophantes bonus —, I. incestus - -, Ivielum sibiricum -.-



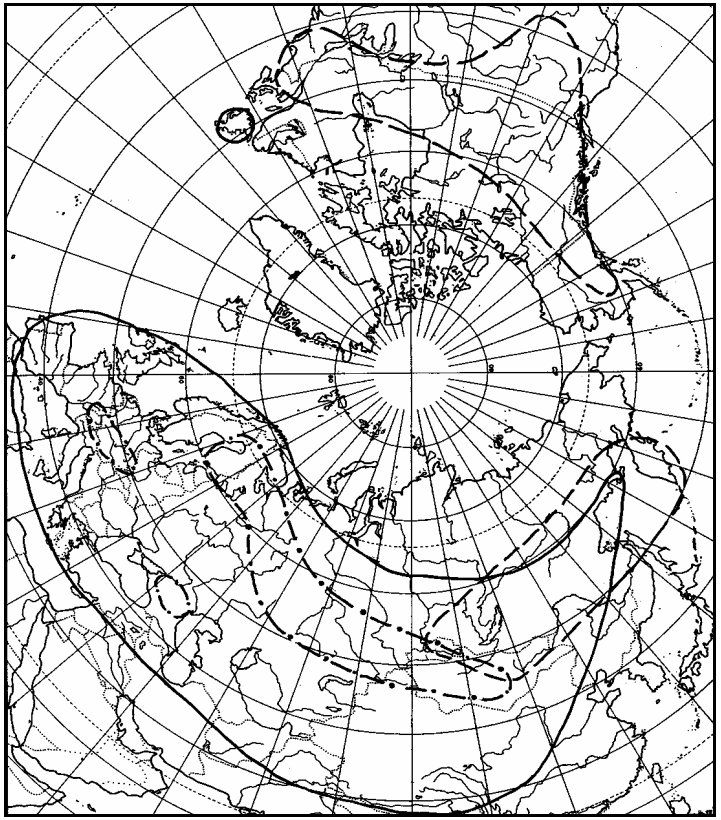
Map 82. Entelecara erythropus —, Erigone piechoki - -, Hypomma cornutum -·-



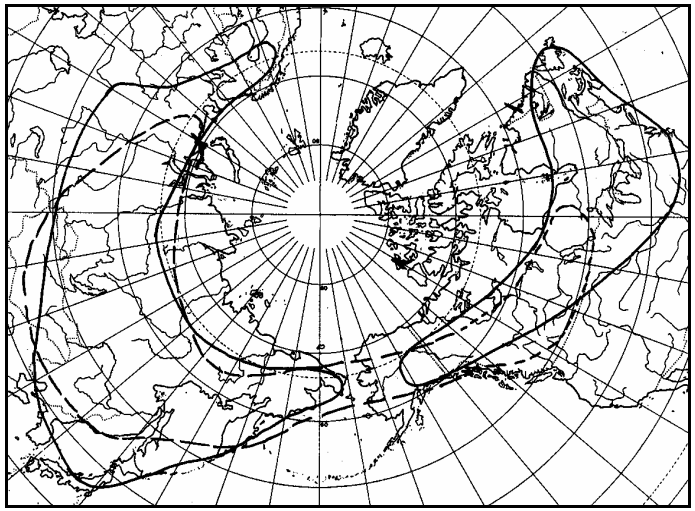
Map 83. Erigone atra —, E. dentigera – –, E. remota - -



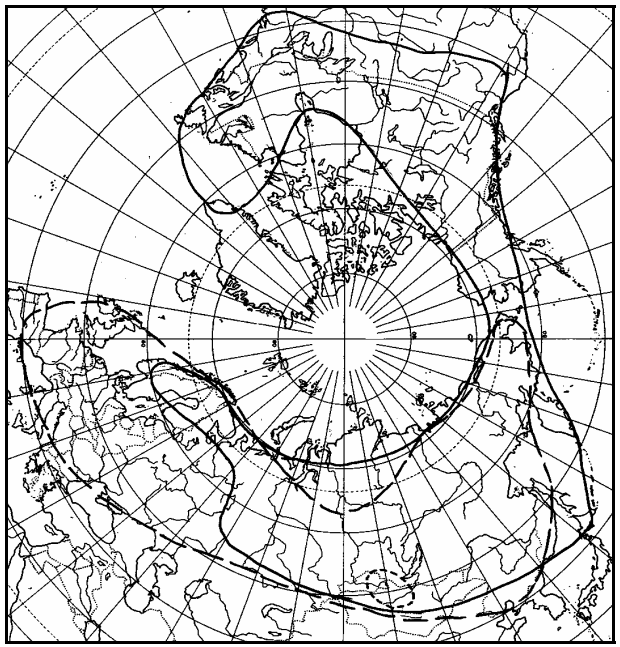
Map 84. Gonatium rubellum —, Hylyphantes nigritus –



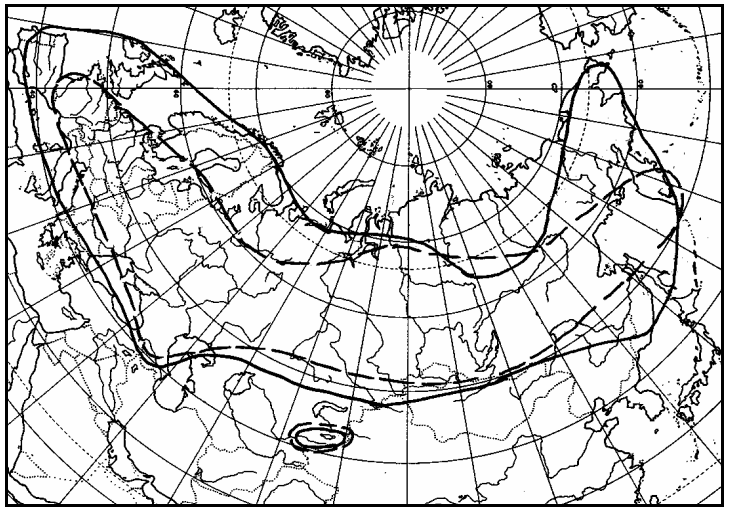
Map 85. Erigone dentipalpis —, E. simillima - -, Lepthyphantes cornutus -·-



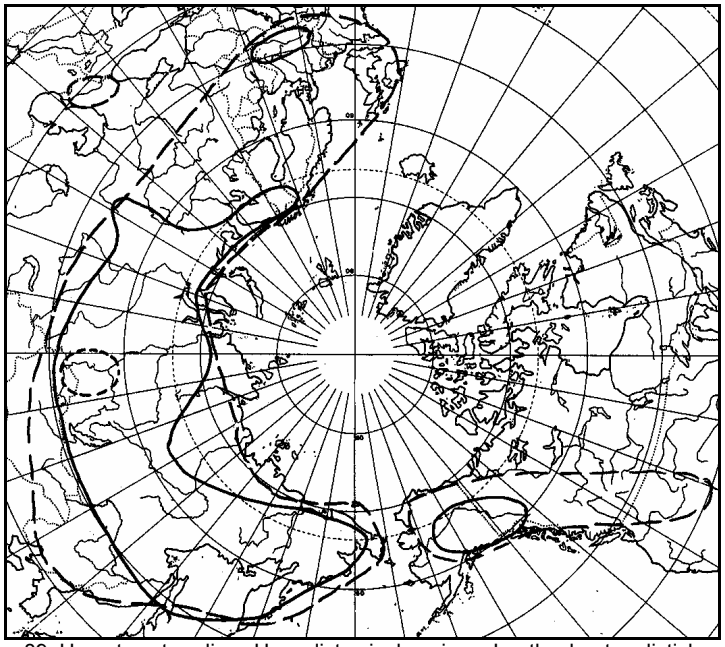
Map 86. Estrandia grandaeva —, Gnathonarium taczanowskii - -



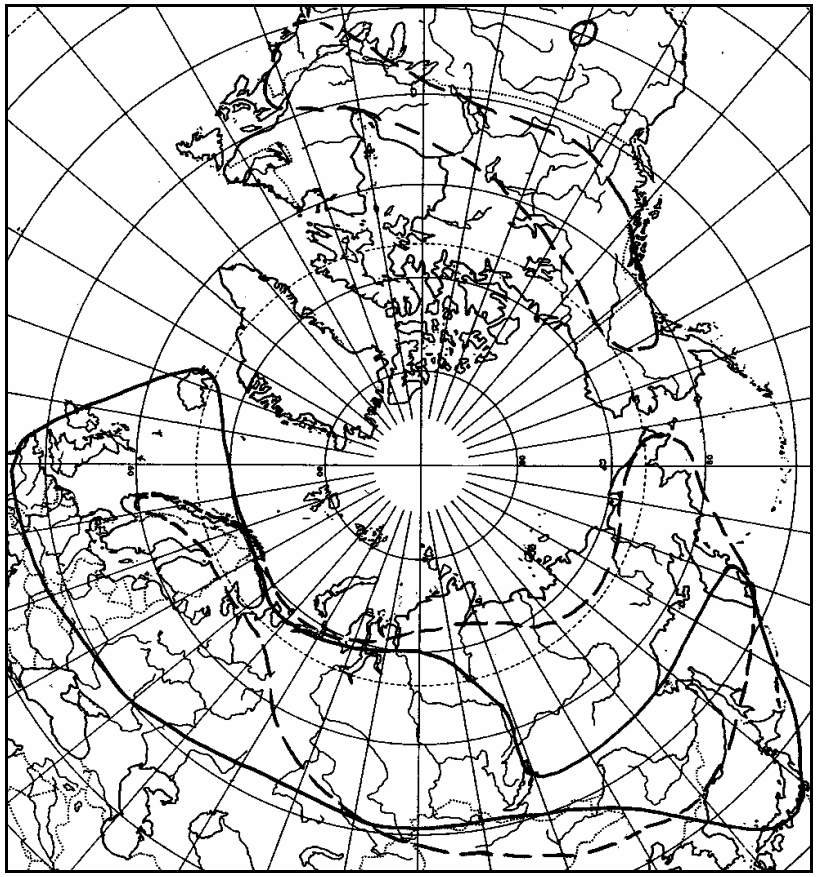
Map 87. Hilaira herniosa —, Hypomma bituberculatum – –, Lepthyphantes kaszabi - -



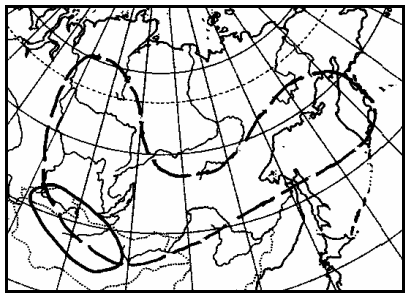
Map 88. Gonatium rubens —, Lasiargus hirsutus - -



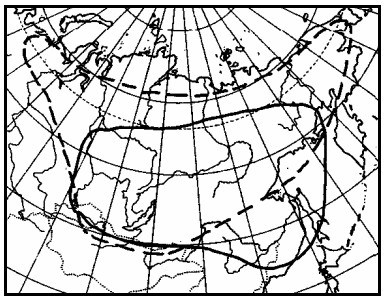
Map 89. Horcotes strandi —, Hypselistes jacksoni – –, Lepthyphantes distichus - -



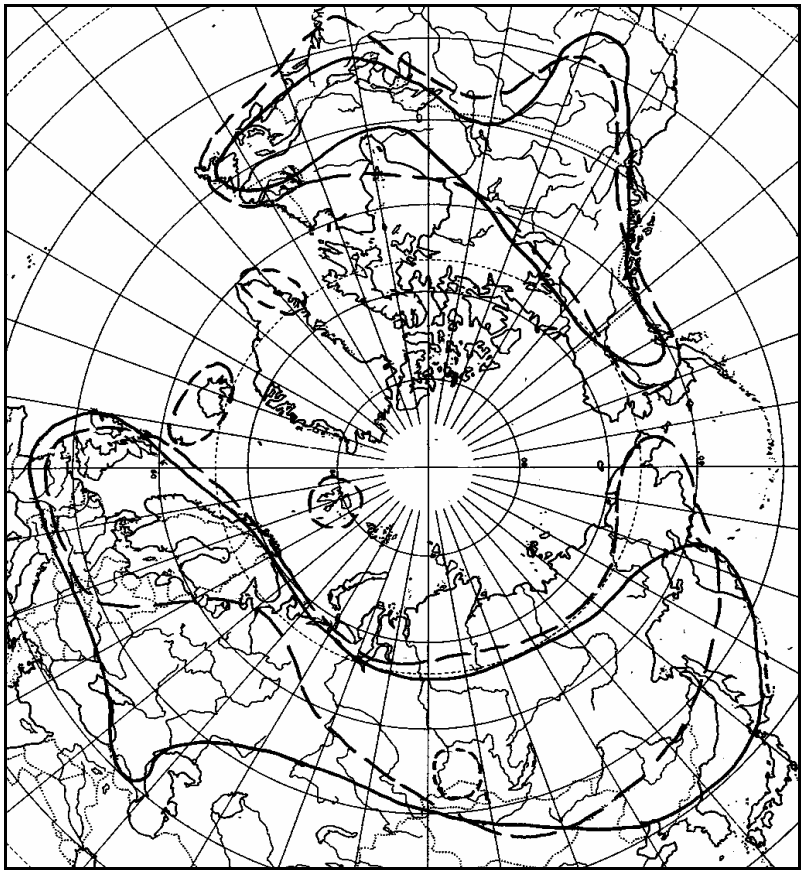
Map 90. Leptorhoptrum robustum —, Macrargus multesimus - -



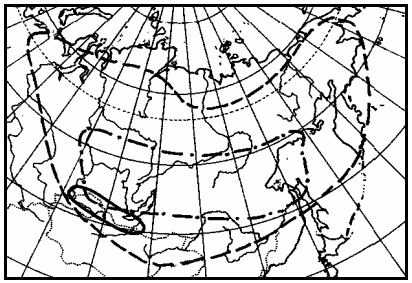
Map 91. Incestophantes tuvensis —, Improphantes flexilis - -



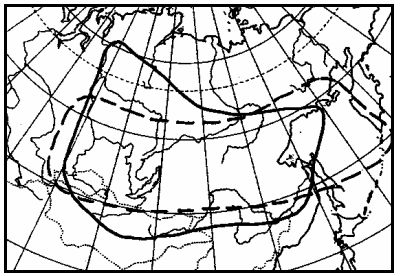
Map 92. Lasiargus pilipes —, Lepthyphantes laricetorum - -



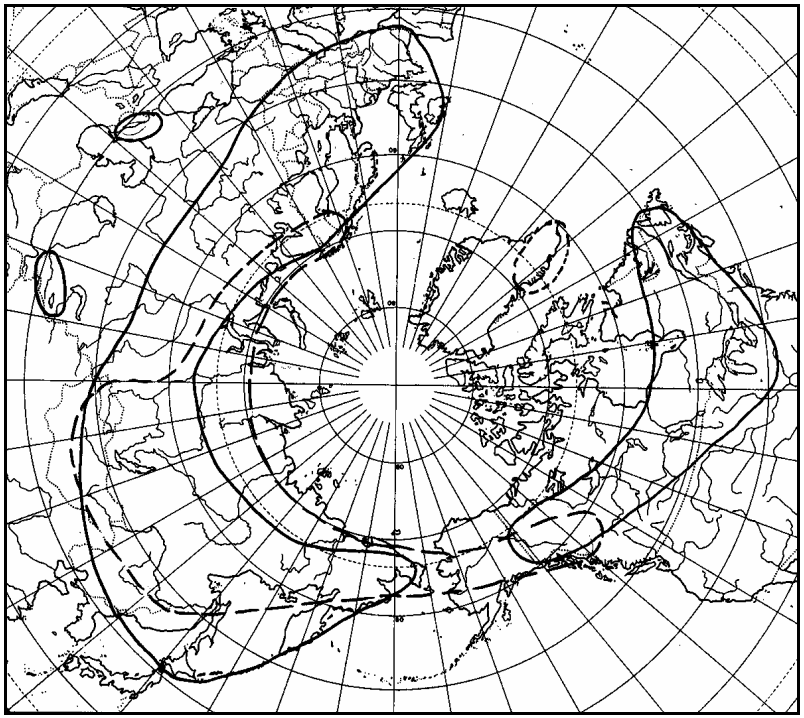
Map 93. Kaestneria pullata —, Lepthyphantes complicatus – –, L. terrenus - -



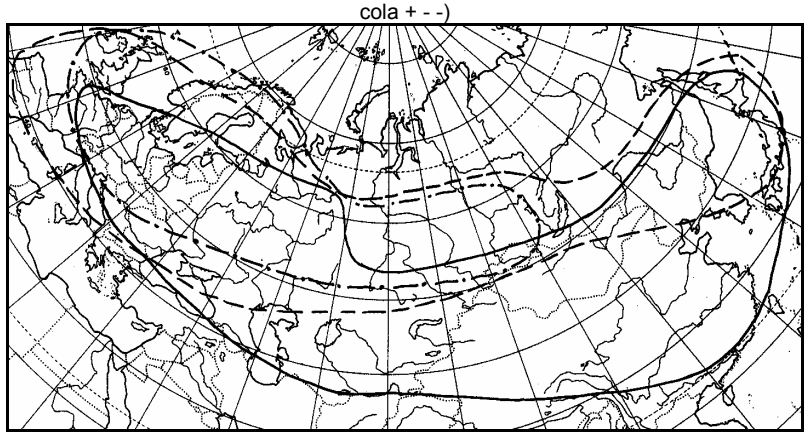
Map 94. Lepthyphantes sajanensis —, L. taczanowskii - -, Maro saaristoi -·-



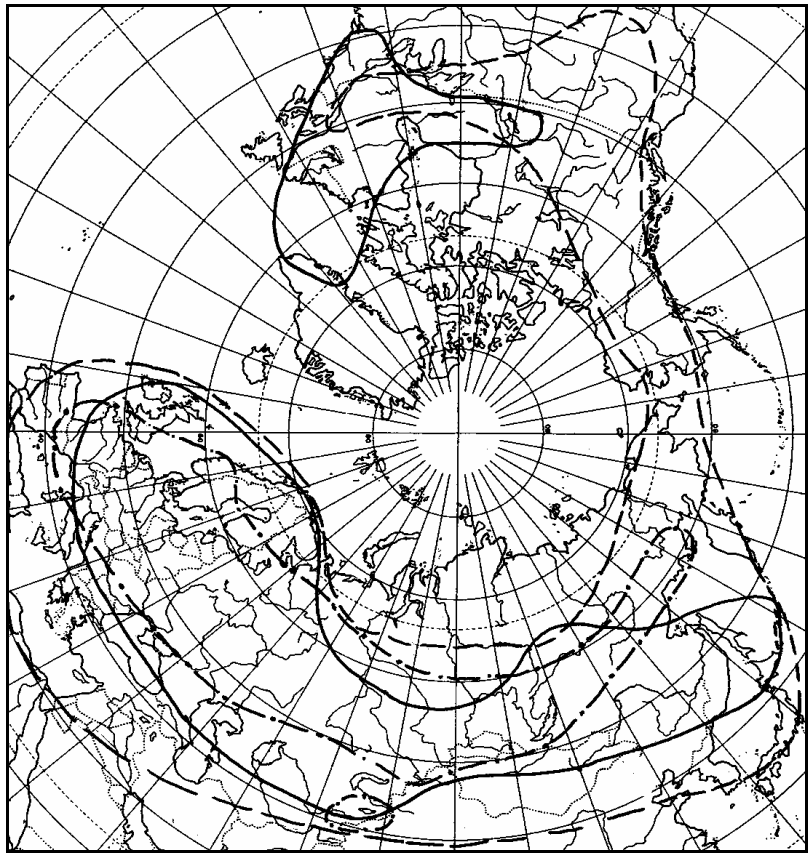
Map 95. Maro flavescens —, M. sibiricus (part) - -



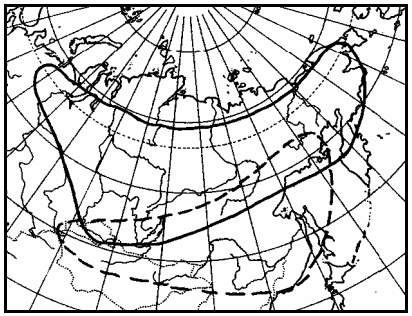
Map 96. Maso sundevalli —, Mecynargus monticola – –, M. sphagnicola (as in M. monticola + - -)



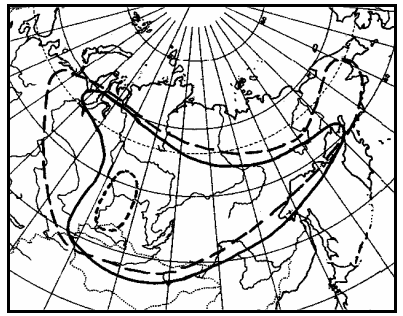
Map 97. Neriene emphana —, N. montana - -, Oedothorax agrestis -·-



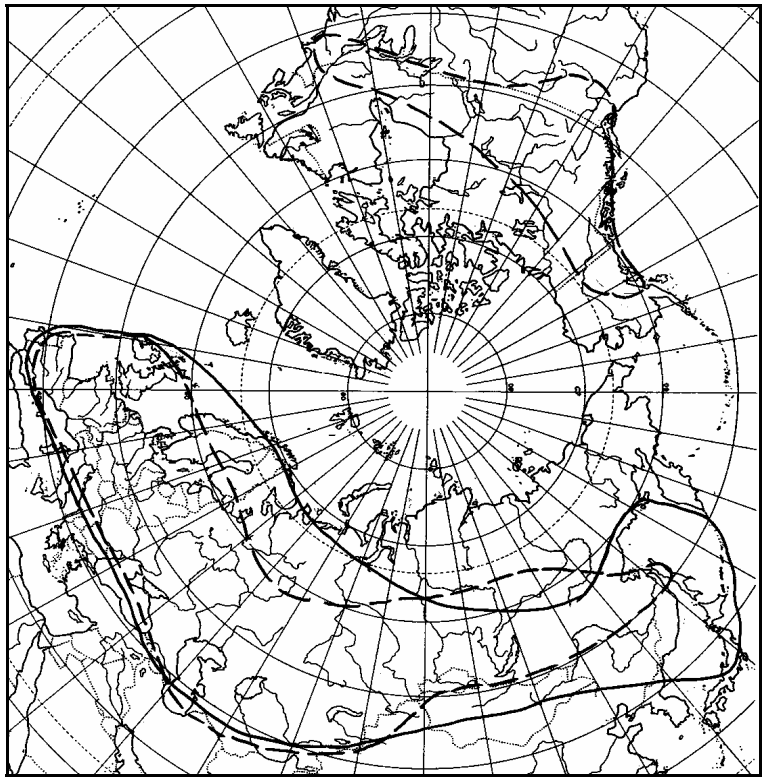
Map 98. Metopobactrus prominulus —, Microlinyphia pusilla - -, Minicia marginella -·-



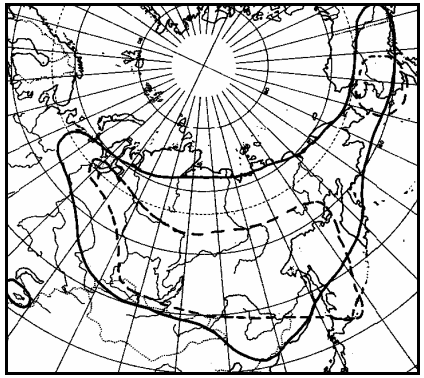
Map 99. Monocerellus montanus —, Nenilinium asiaticum - -



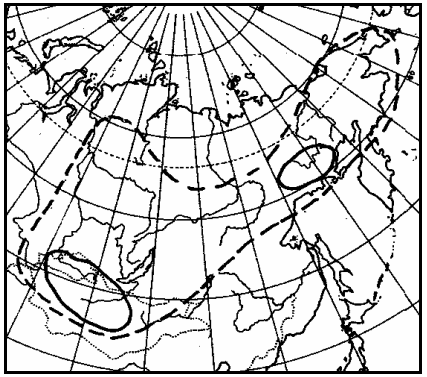
Map 100. Notioscopus jamalensis —, Obscuriphantes pseudoobscurus – –, Oreonetides sajanensis - -



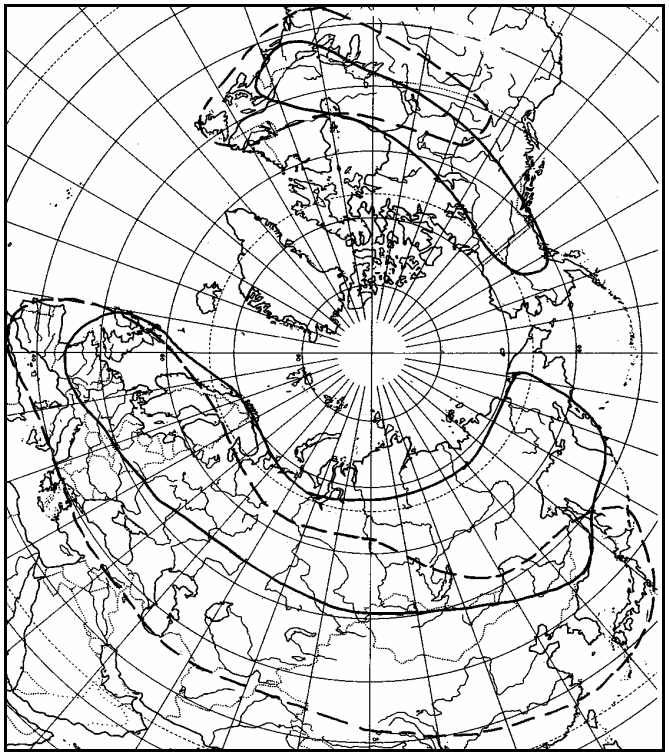
Map 101. Micrargus herbigradus —, Microlinyphia impigra - -



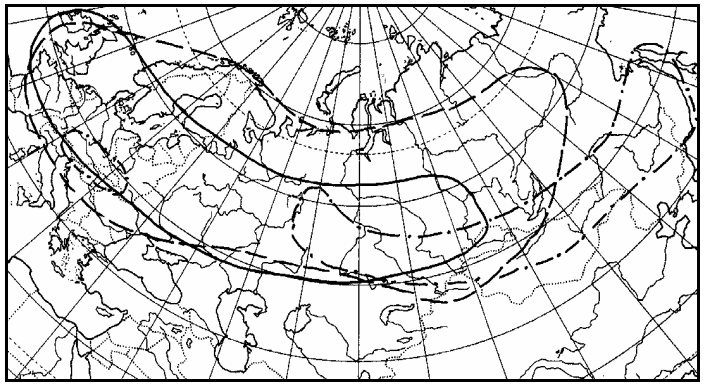
Map 102. Mecynargus tungusicus —, Lophomma cognatum - -



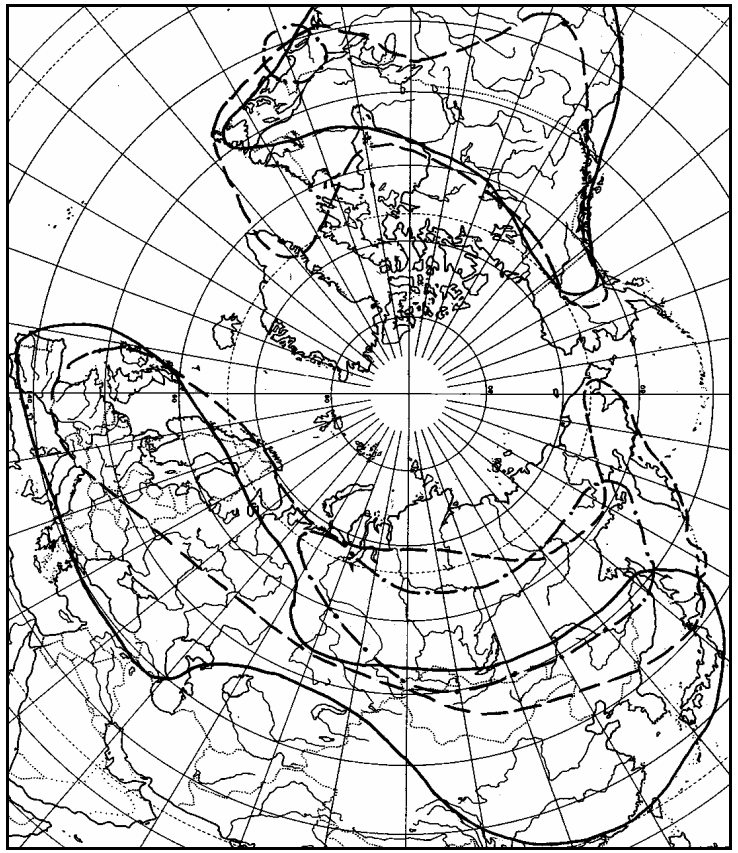
Map 103. “Parawubanoides” marusiki —, Pelecopsis dorniana - -



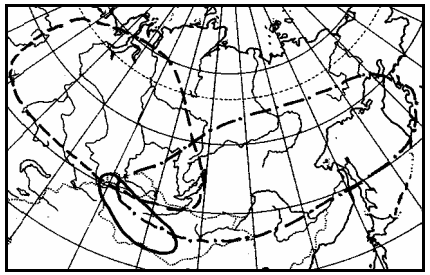
Map 104. Minyrioloides trifrons —, Neriene clathrata - -



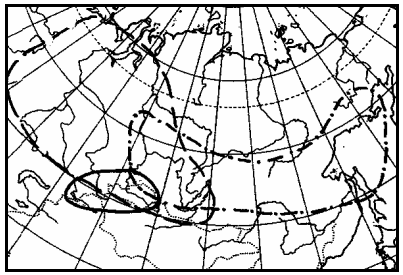
Map 105. Oedothorax gibbosus —, O. retusus - -, Panamomops tauricornis - -



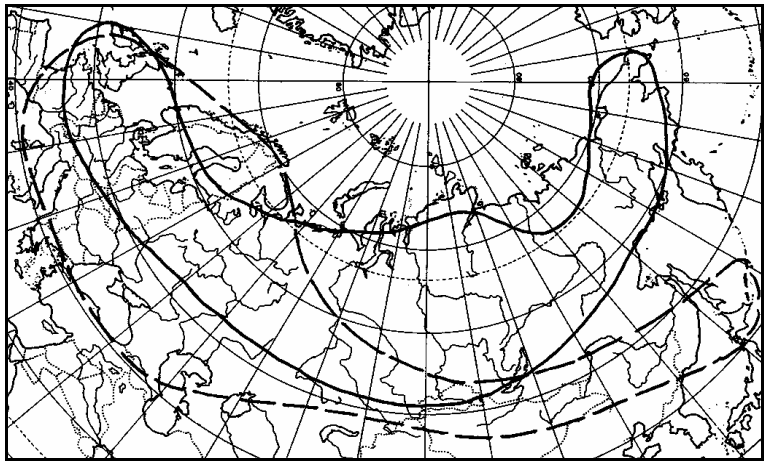
Map 106. Neriene radiata —, Oreonetides vaginatus - -, Poeciloneta theridiformis -·-



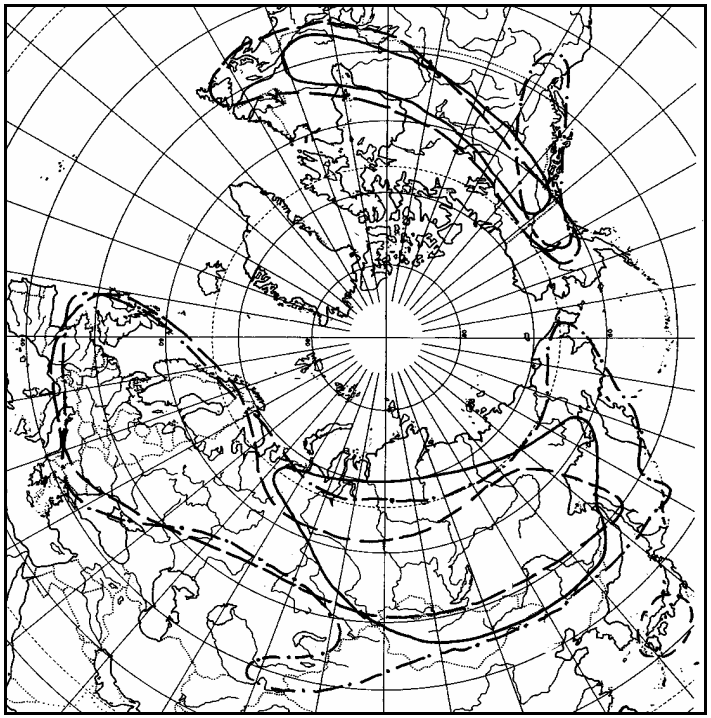
Map 107. “Oedothorax” mongolensis —, Oryphantes geminus - -, Parawubanoides unicornis -·-



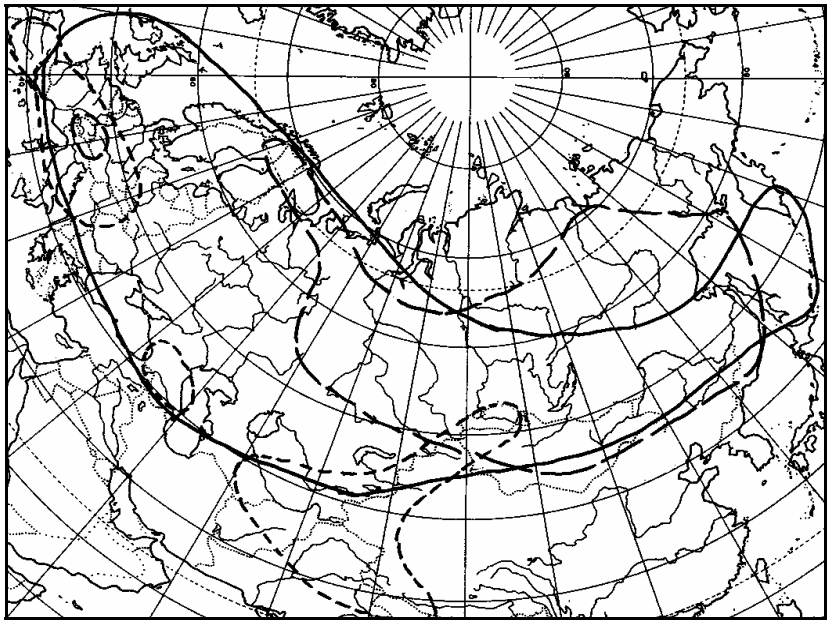
Map 108. Panamomops depilis —, P. dybowskii - -, Paraeboria jeniseica -·-



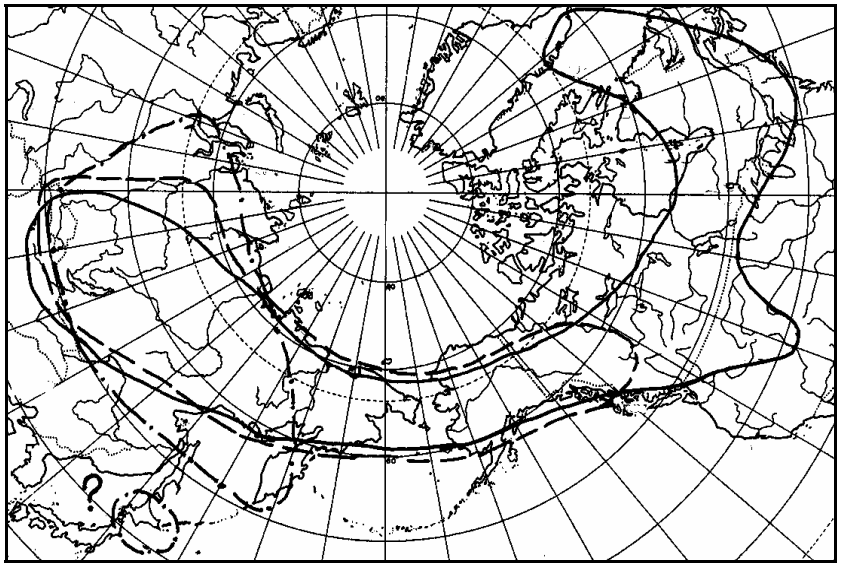
Map 109. Pelecopsis parallela —, Pocadicnemis pumila (in Palaearctic only) - -



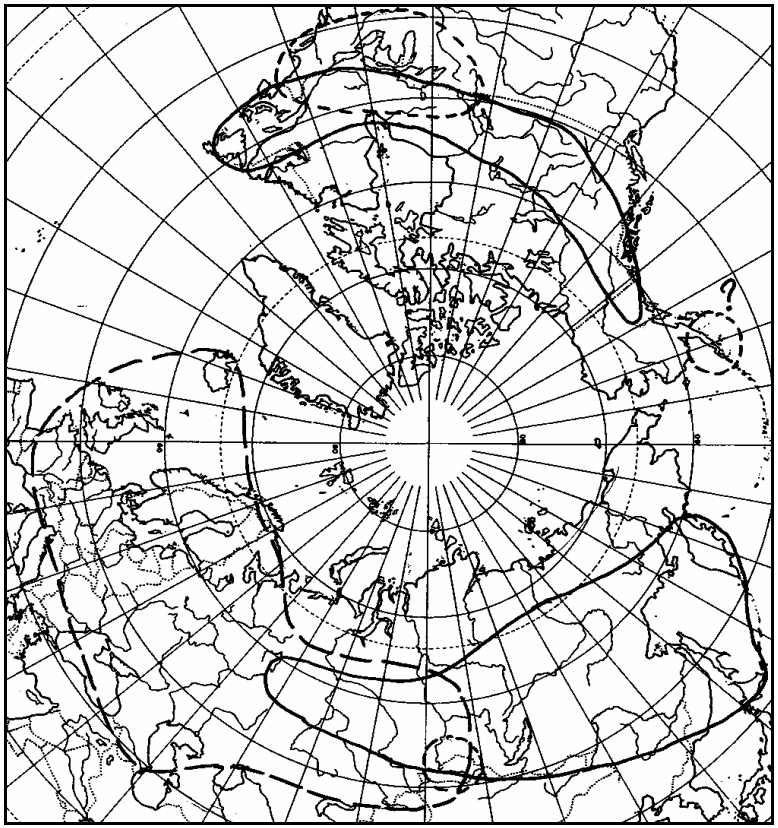
Map 110. Perregrinus deformis —, Pityohyphantes phrygianus - -, Poeciloneta variegata -·-



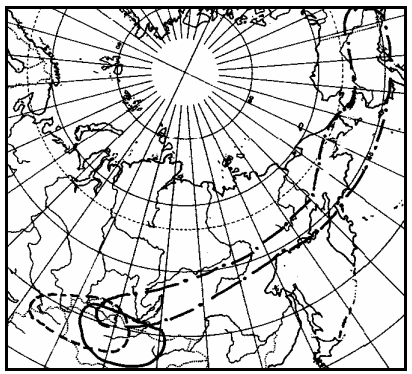
Map 111. Porrhomma pygmaeum —, Scotargus pilosus - -, Scotinotylus alpigenus – –



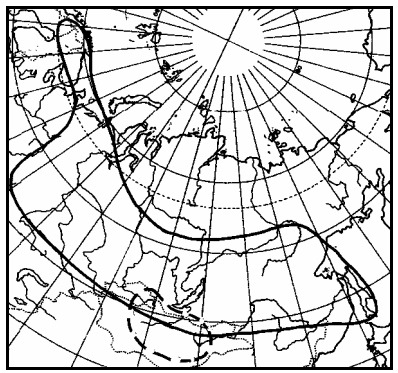
Map 112. Scotinotylus alpinus —, S. protervus - -, Silometopoides sphagnicola -·-



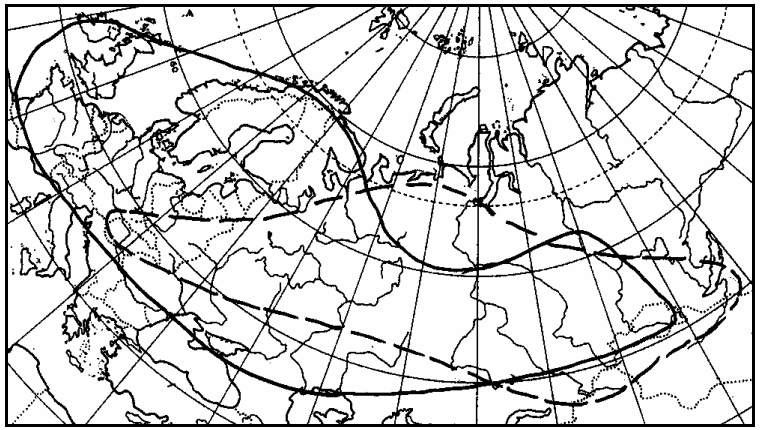
Map 113. Praestigia kulczynskii —, Satilatlas marxii - -, Savignya frontata – –



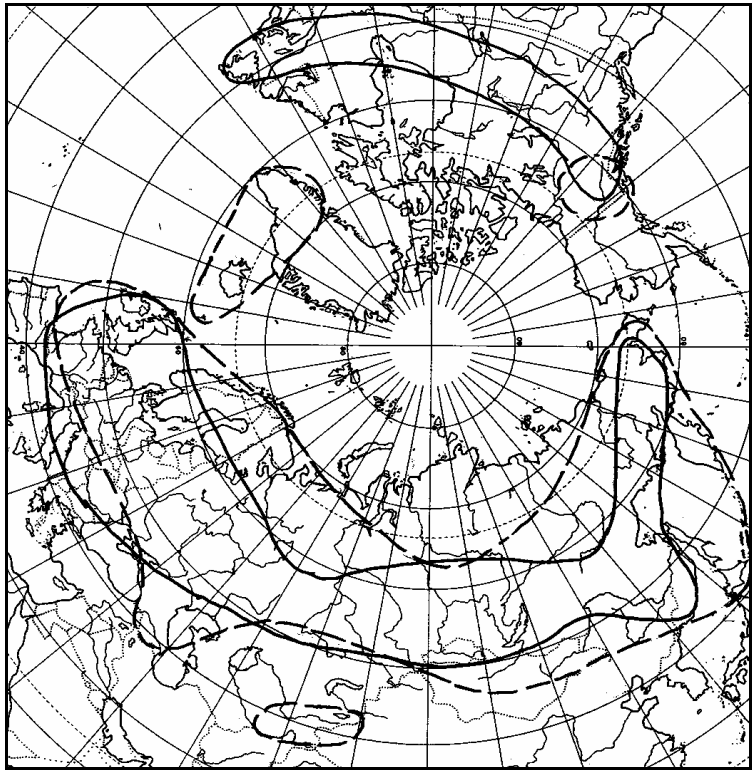
Map 114. Pelecopsis minor —, P. palmgreni - -, Poeciloneta petrophila -·-



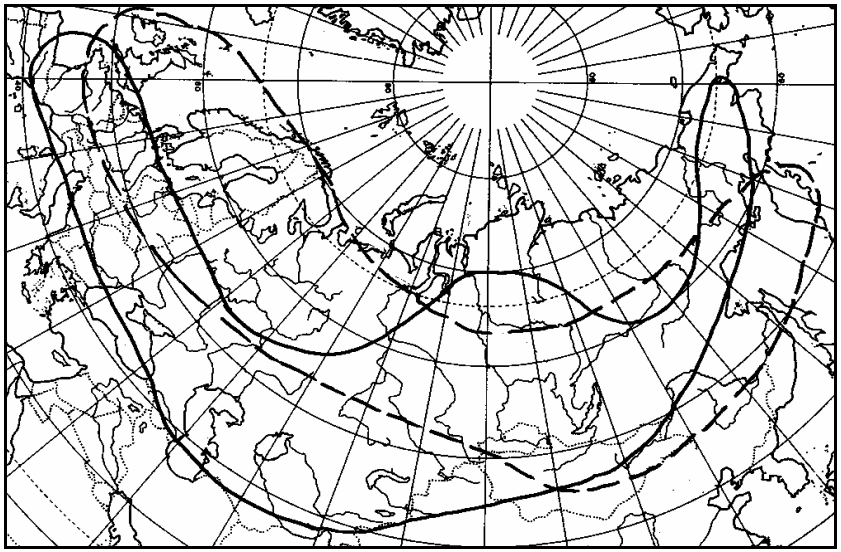
Map 115. Praestigia pini —, Pelecospsis parvicollis - -



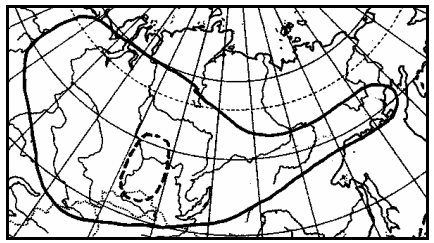
Map 116. Silometopus elegans –, Stemonyphantes conspersus - -



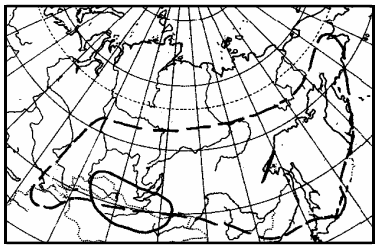
Map 117. Styloctetor stativa —, Tiso aestivus - -



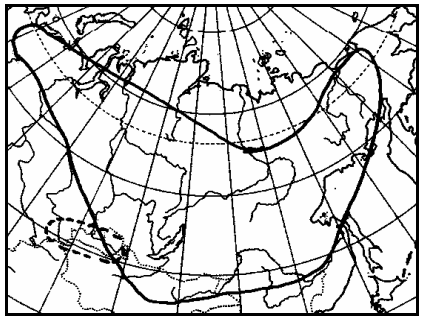
Map 118. Styloctetor romana —, Tmeticus affinis - -



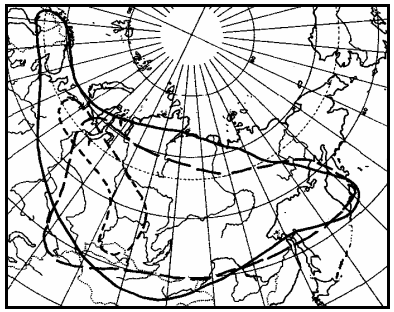
Map 119. Pseudocyba miracula —, Saloca ryvkini - -



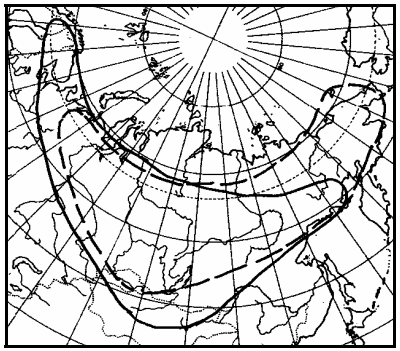
Map 120. Sisis transbaikalicus —, Stemonyphantes sibiricus - -



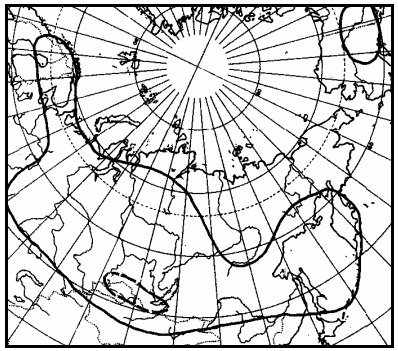
Map 121. Savignya nenilini —, Scotinotylus altaicus - -



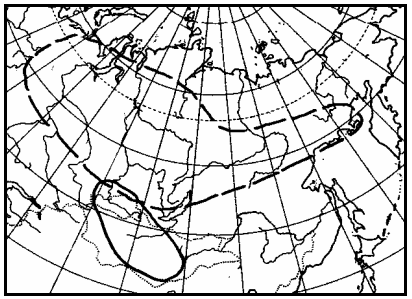
Map 122. Semljicola angulatus —, S. thaleri – –, Sliometopus uralensis - -



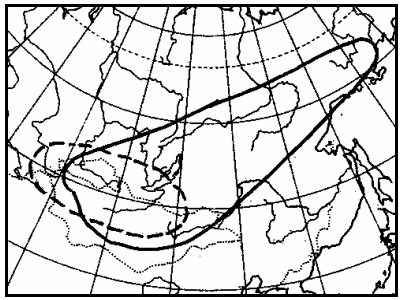
Map 123. Semljicola latus —, Sibirocyba incerta - -



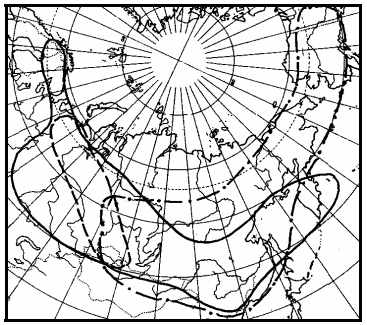
Map 124. Tibioplus diversus —, Thaleria sajanensis - -



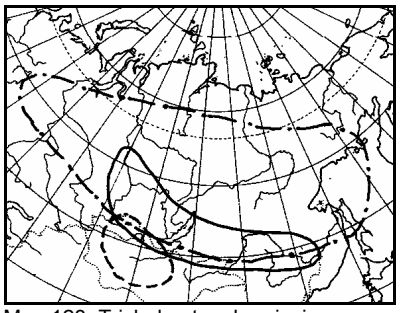
Map 125. Styloctetor logunovi —, Tanasevitchia uralensis - -



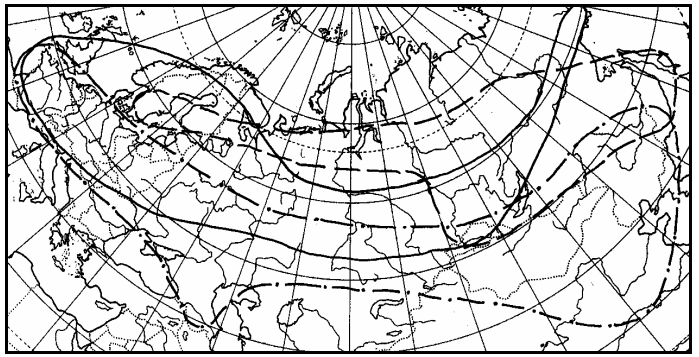
Map 126. Typhochrestoides baikalensis - -, Walckenaerianus aimakenis –



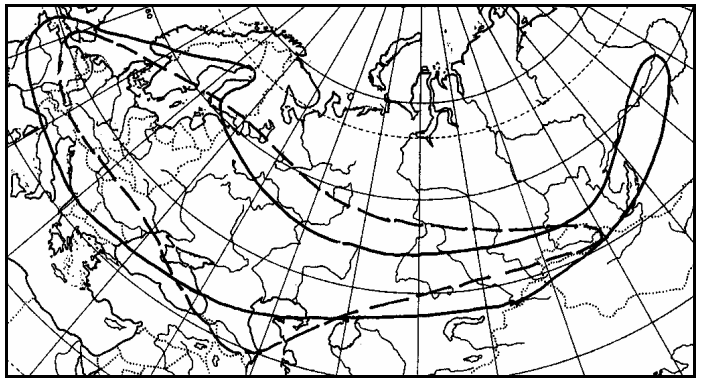
Map 127. Tenuiphantes nigriventris —, Thaleria orientalis - -, Walckenaeria fraudatrix -·-



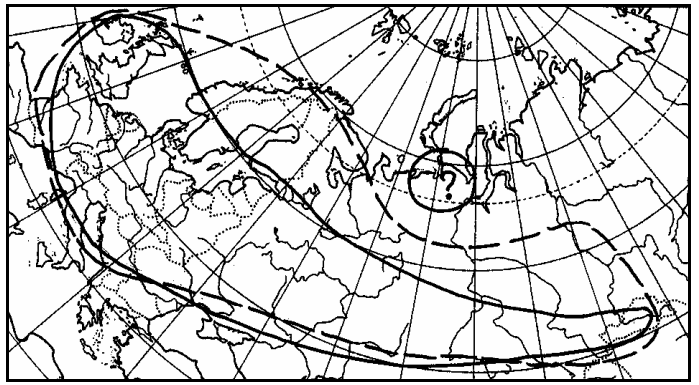
Map 128. Trichobactrus brevispinosus - -, Victorium putoranicum -·-, Ummeliata sibirica —



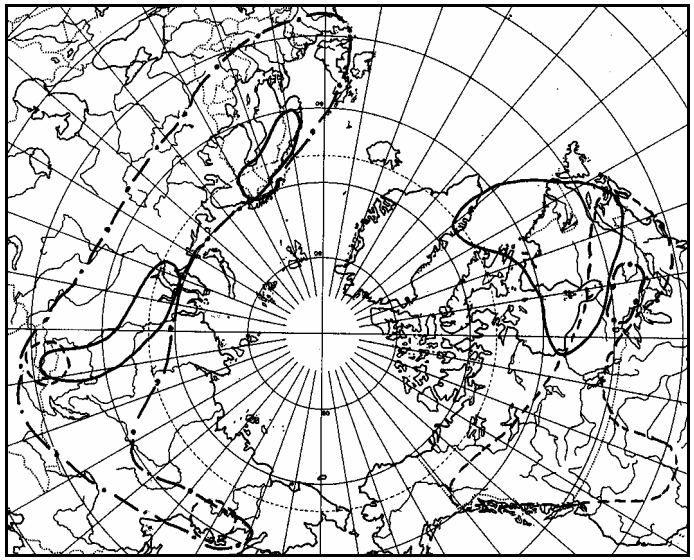
Map 129. Thyreostenius biovatus —, Tibioplus arcuatus - -, Trematocephalus cristatus -·-



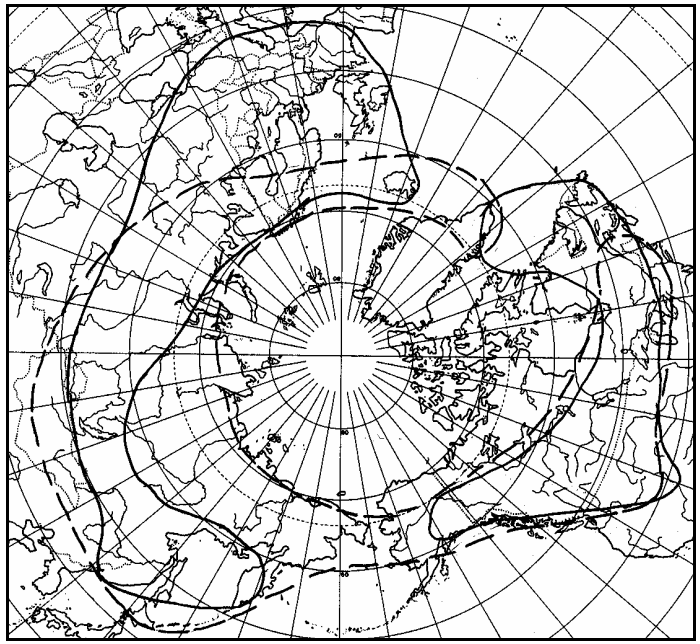
Map 130. Trichoncus vasconicus —, Trichopterna cito - -



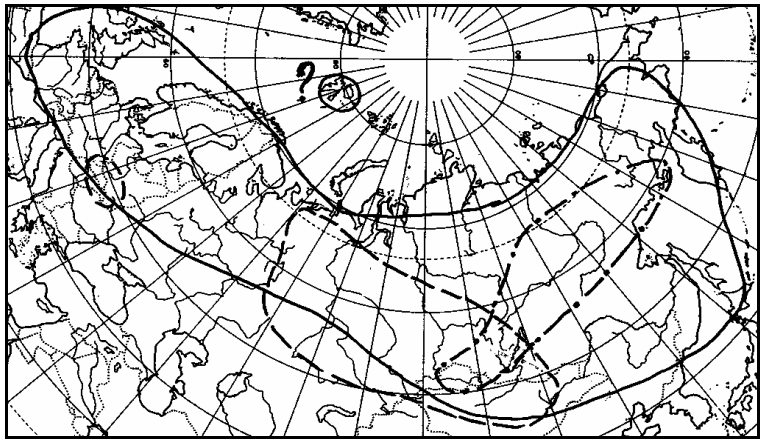
Map 131. Trichopterna thorelli —, Troxochrus scabriculus - -



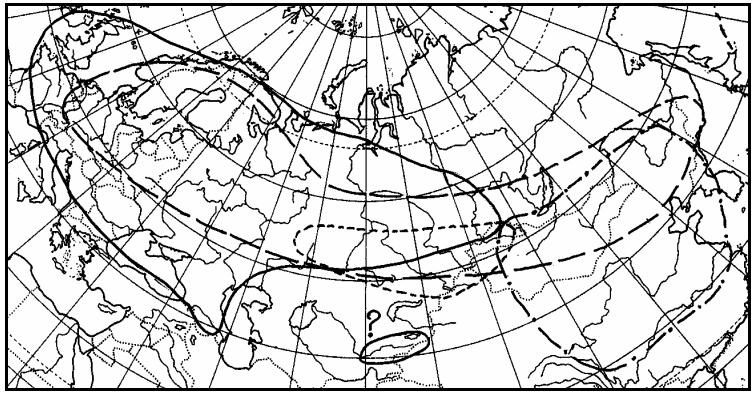
Map 132. Wabasso questio —, Walckanaeria auranticeps - -, W. capito -·-



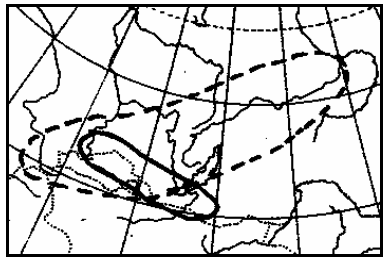
Map 133. Walckenaeria cuspidata —, W. karpinskii - -



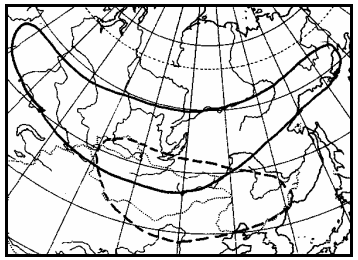
Map 134. Walckenaeria korobeinikovi —, Wubanoides uralensis - -, Zornella cf. cultrigera -·-



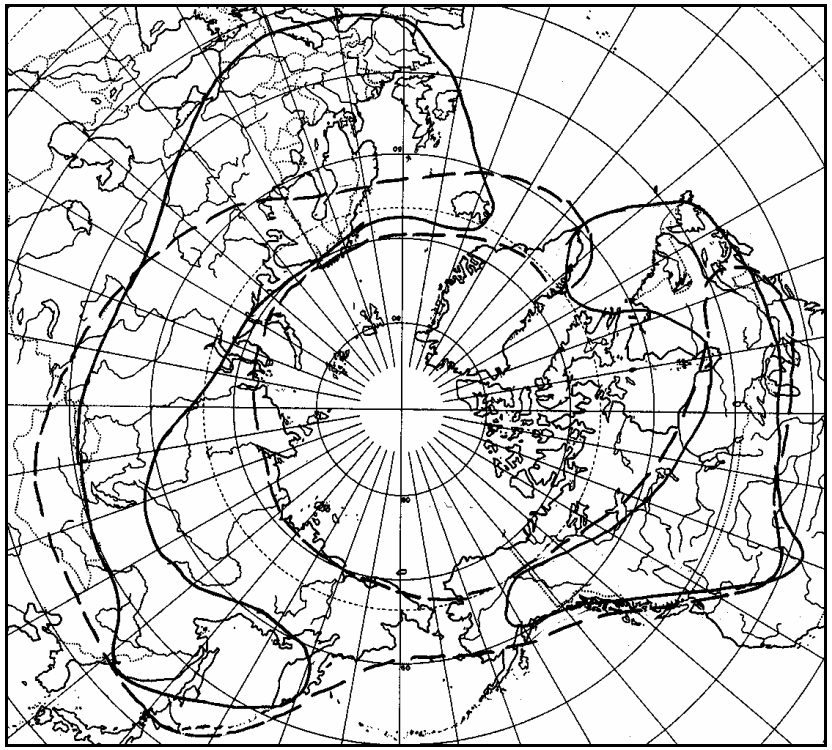
Map 135. Walckenaeria antica —, W. kazakhstanica - -, Acantholycosa lignaria – –, Alopecosa licenti -·-



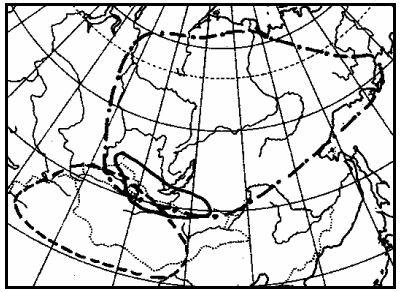
Map 136. Walckenaeria koenboutjei —, Yakutopus xerophilus - -



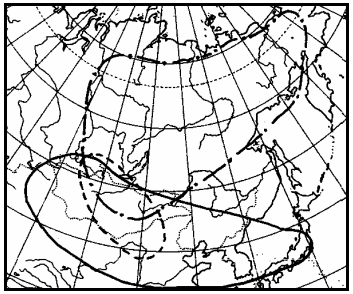
Map 137. Agroeca maculata —, Phrurolithus sinicus - -



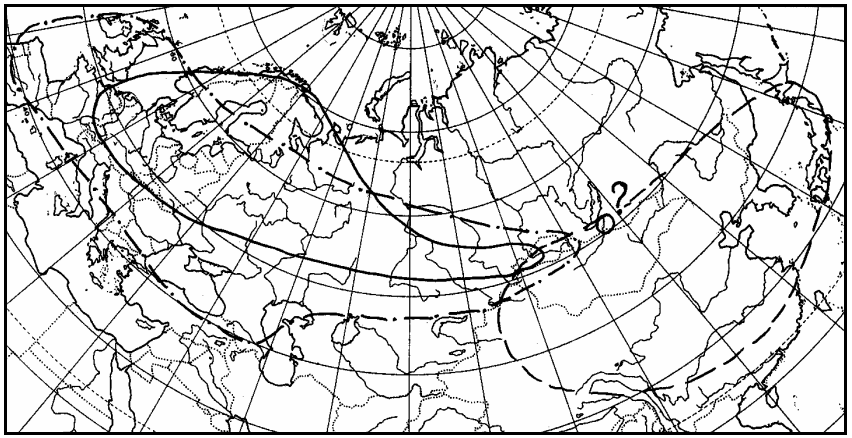
Map 138. Walckenaeria lepida —, Alopecosa aculeata- -



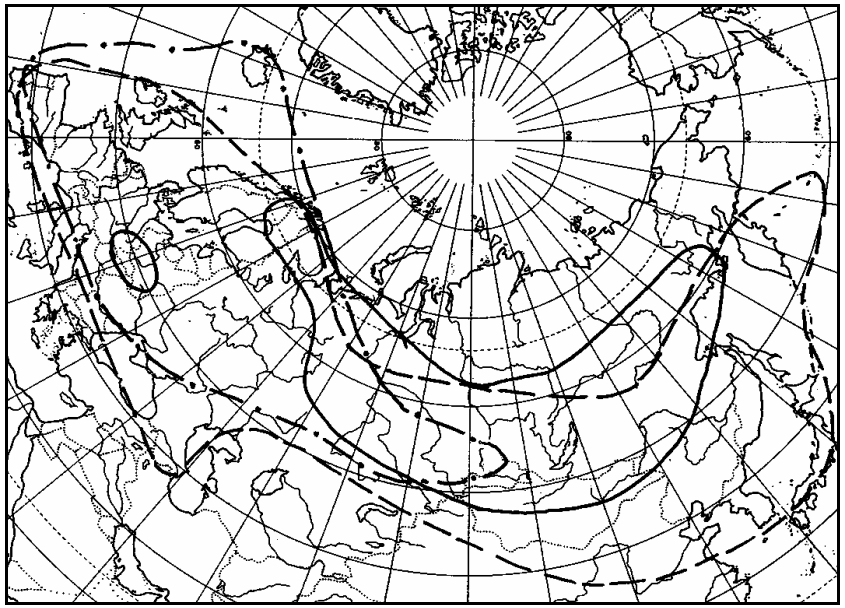
Map 139. Acantholycosa sterneri —,
A. triangulata - -, Alopecosa albostriata -·-



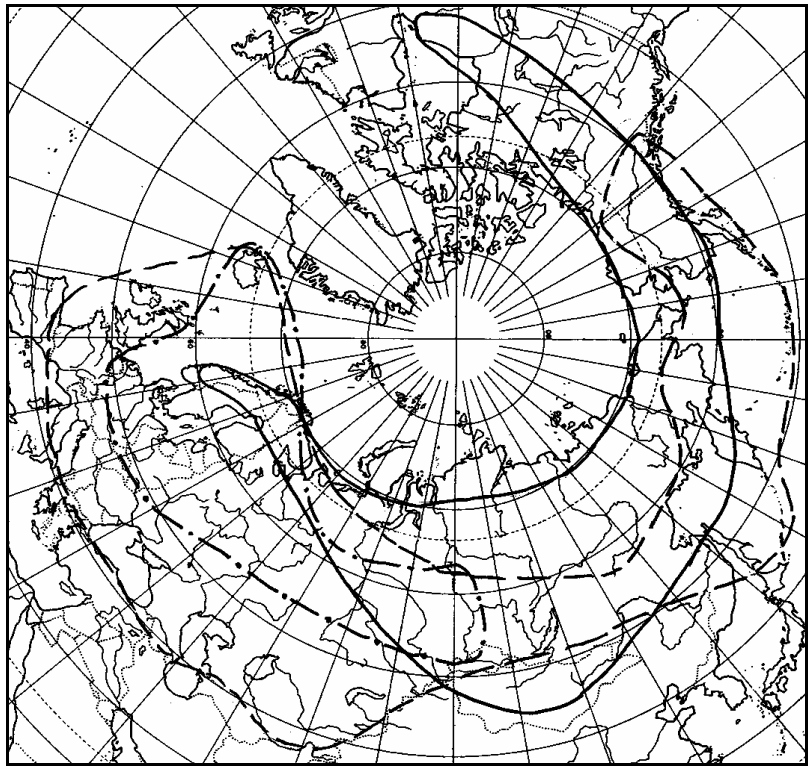
Map 140. Alopecosa sibirica -·-
A. cinnameopilosa —, A. hingganica - -



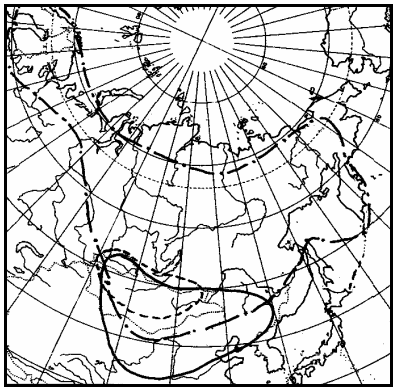
Map 141. Alopecosa pinetorum —, Pardosa astrigera - -, Xerolycosa miniata -·-



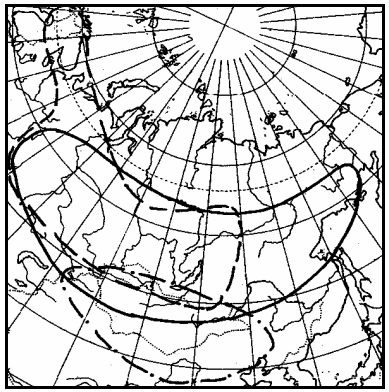
Map 142. Acantholycosa norvegica —, Alopecosa pulverulenta - -, Padosa amentata -·-



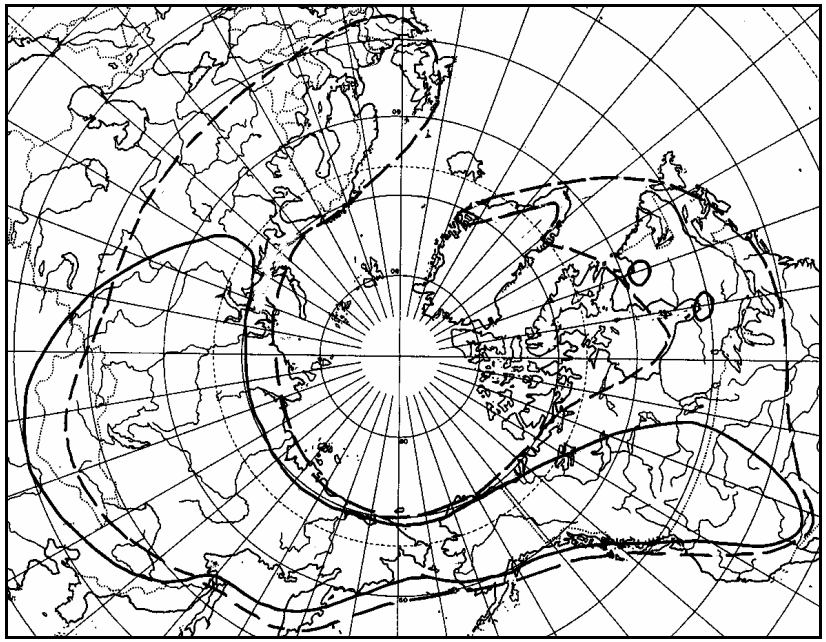
Map 143. Pardosa lapponica —, P. palustris - -, P. sphagnicola -·-



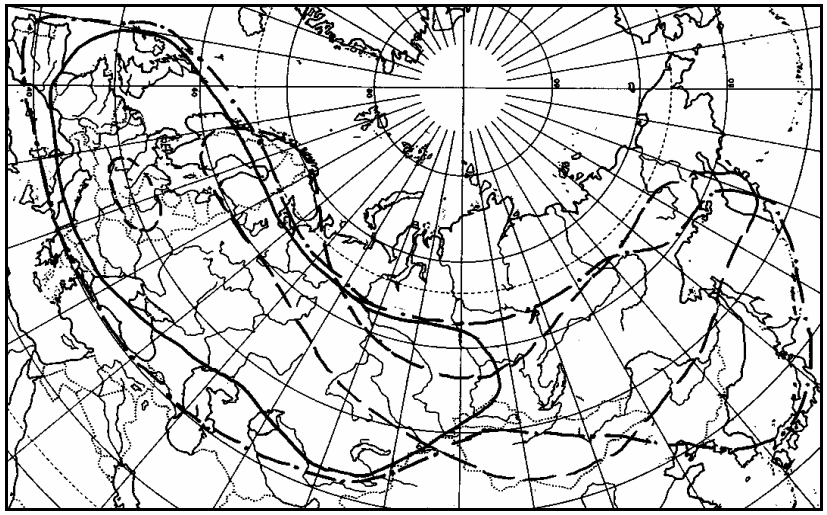
Map 144. Alopecosa subrufa —,
A. zyuzini - -, Pardosa atrata -·-



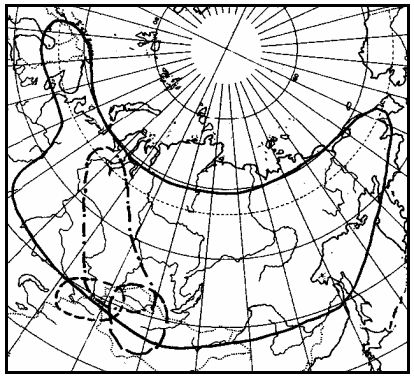
Map 145. Pardosa jeniseica —,
P. lasciva - -, P. cf. paratesquorum -·-



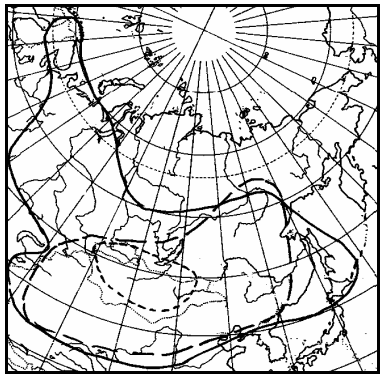
Map 146. Pardosa tesquorum —, Tricca alpigena - -



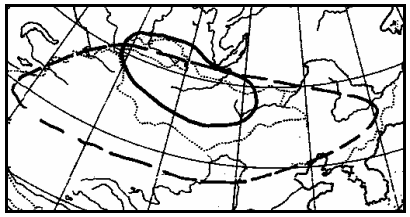
Map 147. Pirata hygrophilus —, Pardosa schenkeli - -, Xerolycosa nemoralis -·-



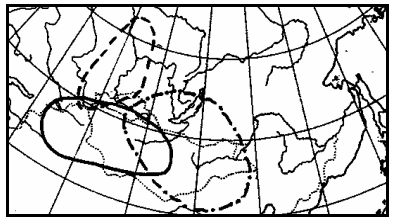
Map 148. Evippa sibirica - -, Evippa sp. – –, Pardosa eiseni —, P.oljunae -·-



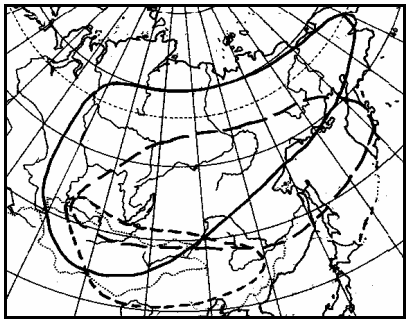
Map149. Pardosa plumipes —, P. ricta – –, P. selengensis - -



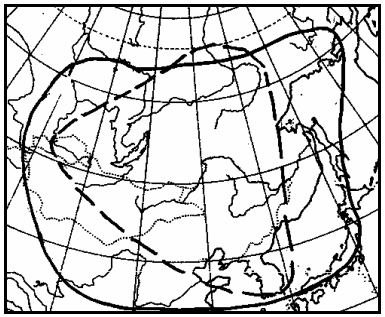
Map 150. Pardosa baraan & P. bukukun —, P. etsinensis - -



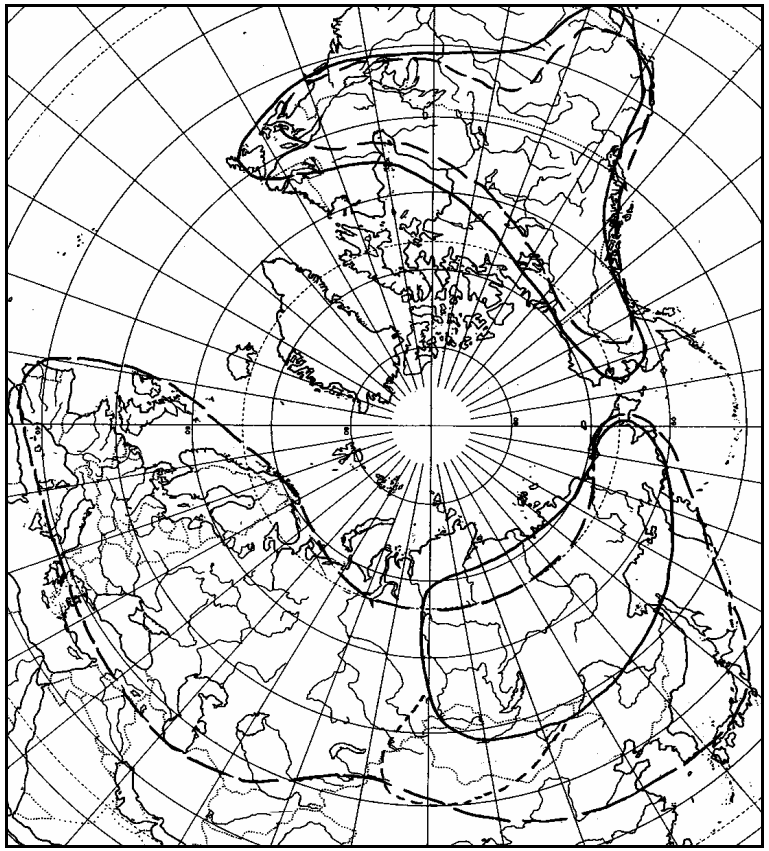
Map 151. Pardosa nenilini —, P. oksalai - -, P. cf. lapponica #1 -·-



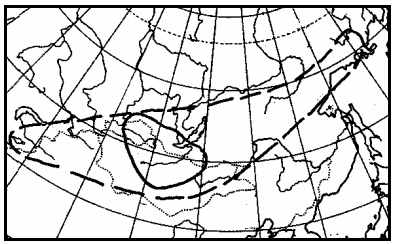
Map 152. Pardosa cf. lapponica #2 —, , Pirata praedo – –, Xerolycosa mongolica - -



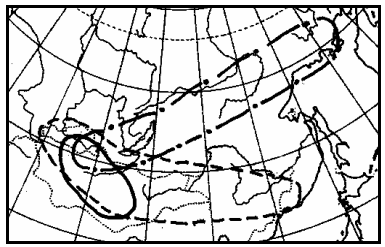
Map 153. Oxyopes licenti —, Apollophanes macropalpus - -



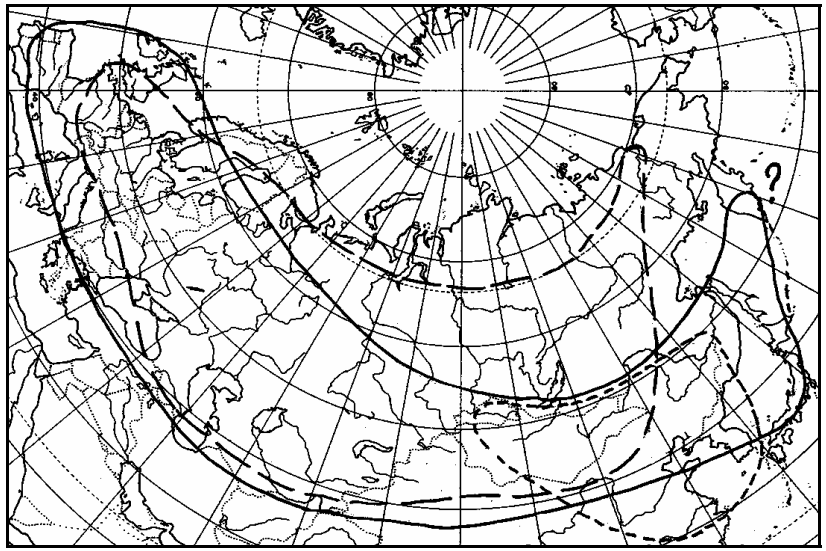
Map 154. Philodromus alascensis — & - -, P. cespitum – –



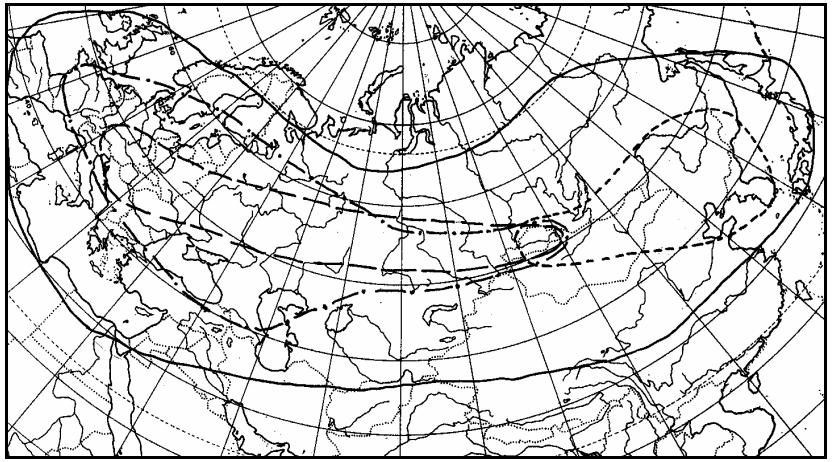
Map 155. Artanes marusiki —, Thanatus tuvinensis - -



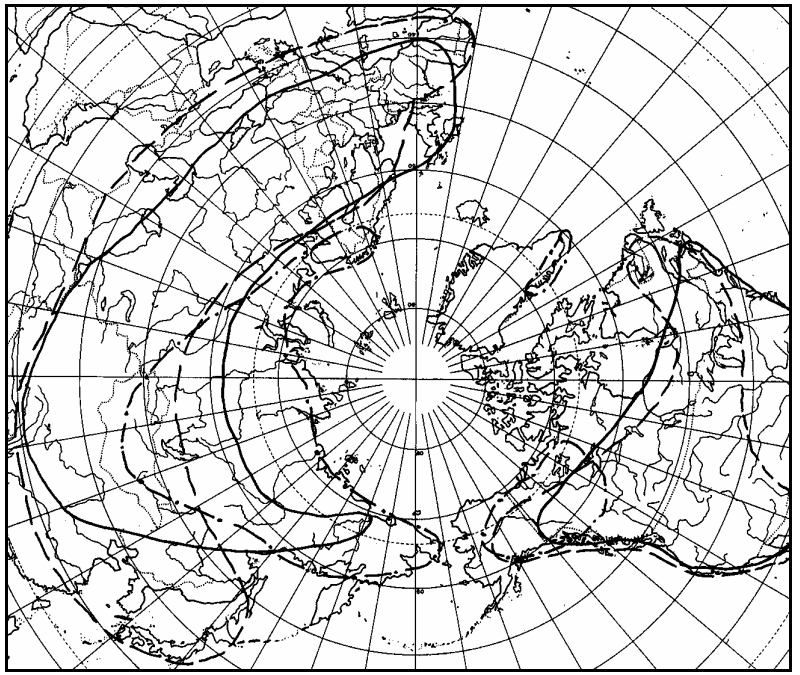
Map 156. Thanatus ubsunurensis —, Tibellus aspersus - -, Dolomedes bukhkaloi -·-



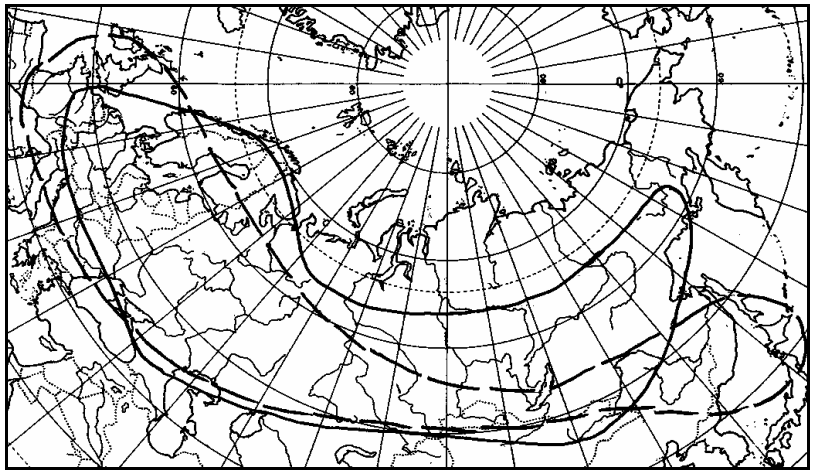
Map 157. Philodromus aureolus —, P. fallax – –, Pisaura ancora - -



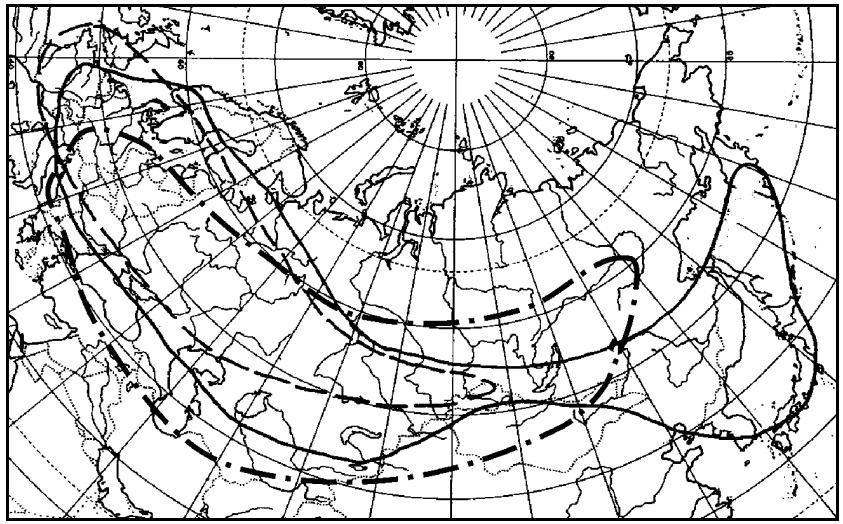
Map 158. Philodromus corticinus – –, P. emarginatus —, Thanatus arenarius -·-, T. coreanus - -



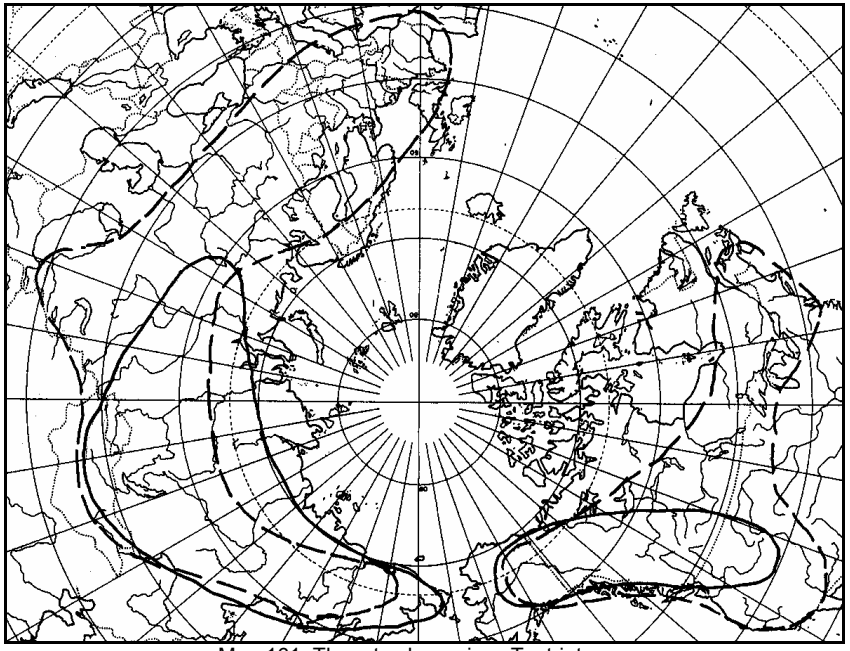
Map 159. Philodromus histrio —, P. rufus - -, Thanatus arcticus -·-



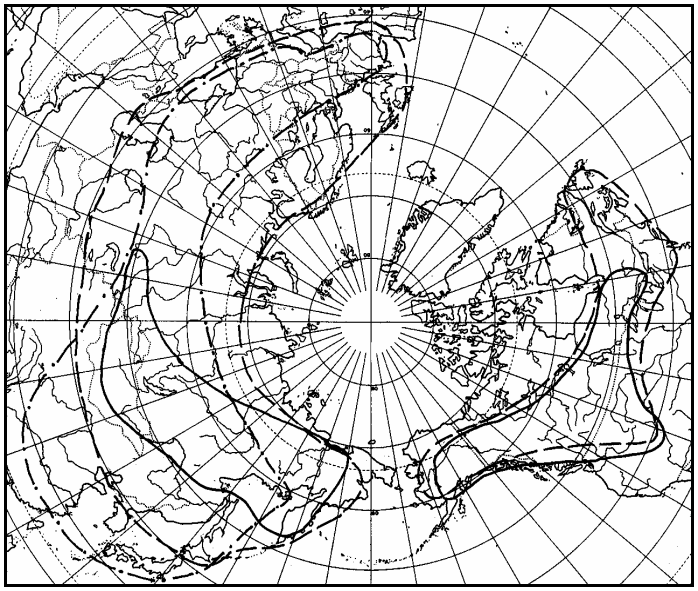
Map 159b. Philodromus fuscomarginatus —, P. margaritatus - -



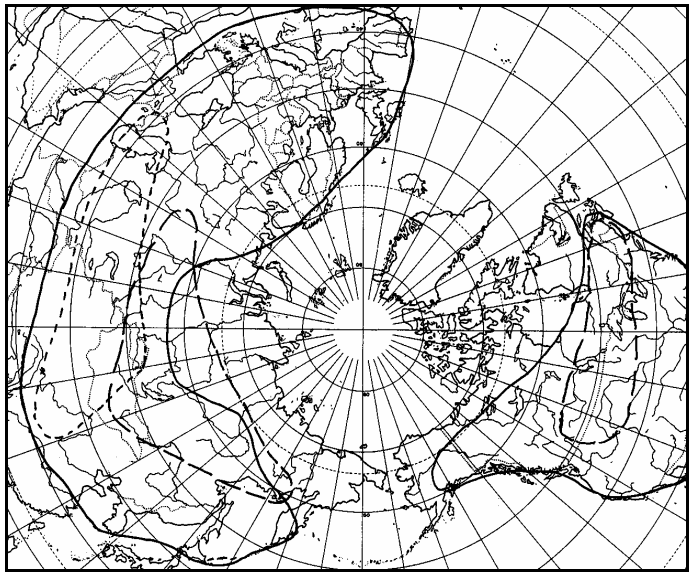
Map 160. Philodromus poecilus —, Dolomedes plantarius - -, Phlegra fuscipes -·-



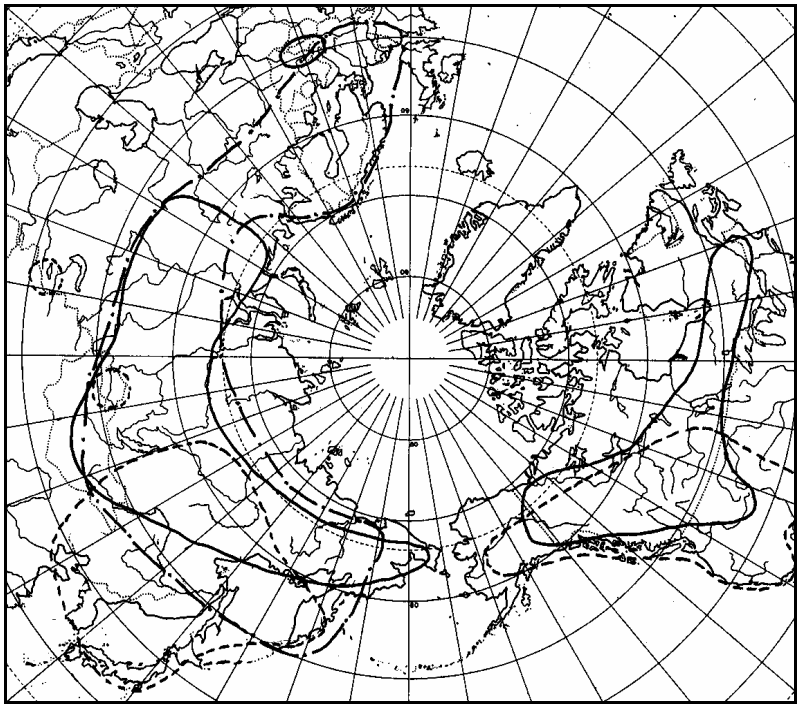
Map 161. Thanatus bungei —, T. striatus - -



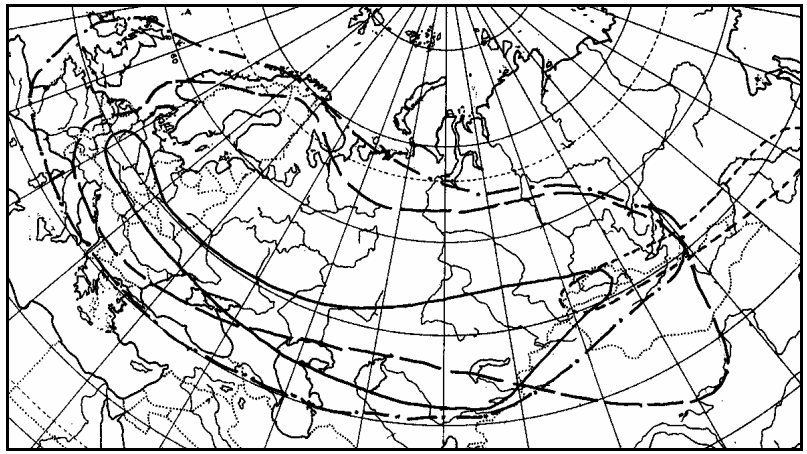
Map 162. Tibellus asiaticus —, T. maritimus - -, Asianellus festivus -·-



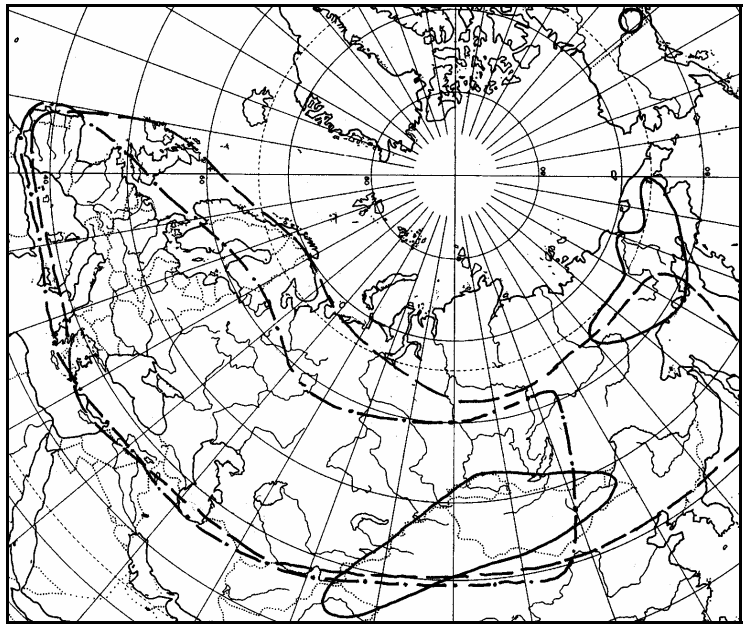
Map 163. Tibellus oblongus —, Bianor aemulus – –, B. inexplorator - -



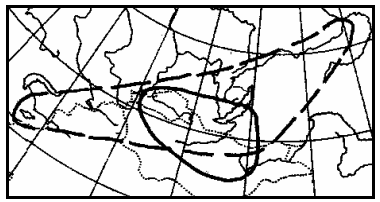
Map 164. Chalcoscirtus alpicola —, Evarcha proszynskii - -, Heliophanus camtschadalicus -·-



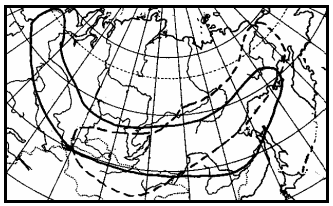
Map 164b. Chalcoscirtus nigritus —, Dendryphantes hastatus – –, Evarcha falcata -·-, "Harmochirus " latens - -



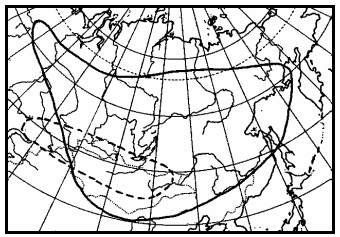
Map 165. Chalcoscirtus glacialis —, Evarcha arcuata - -, Heliophanus auratus -·-



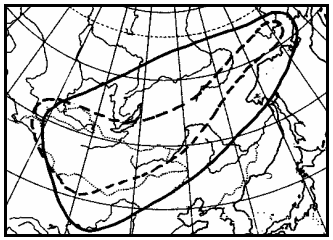
Map 166. Asianelus ontchalaan —," Bianor" stepposus



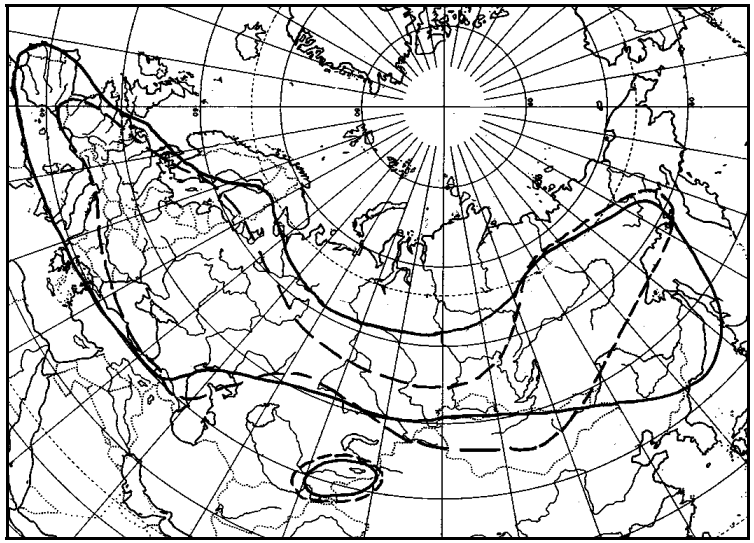
Map 167. Euophrys flavoatra —, E. proszynskii - -



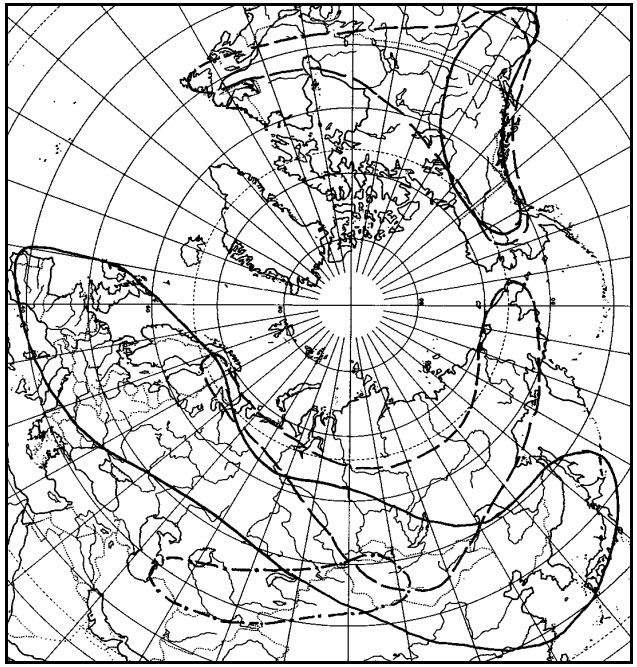
Map 168. Dendryphantes fusconotatus —, D. tuvinensis - -



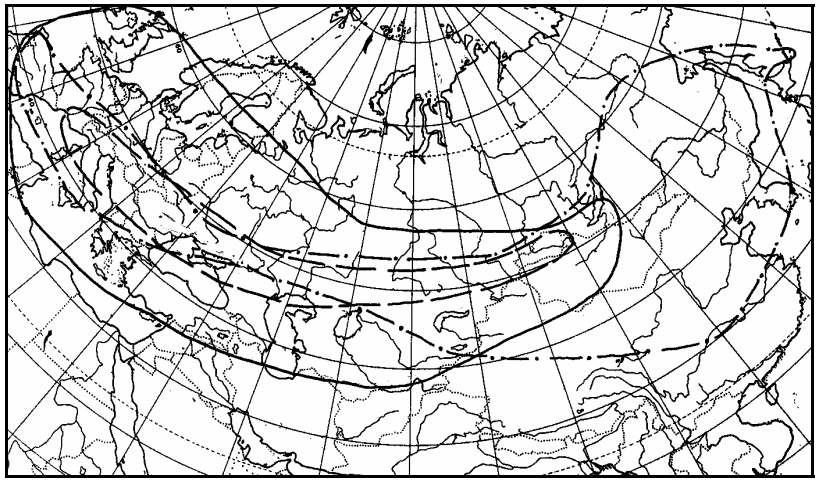
Map 169. Heliophanus baicalensis —, Pellenes gobiensis - -



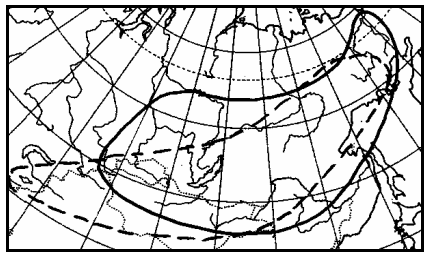
Map 170. Heliophanus dubius —, Heliophanus patagiatus - -



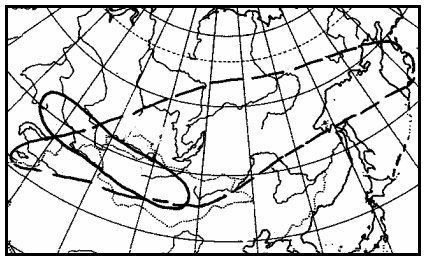
Map 171. Neon reticulatus —, Sitticus lineolatus - -, Synageles ramitus -·-



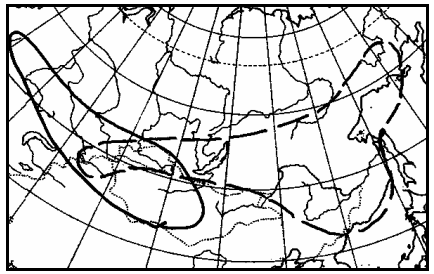
Map 172. Heliophanus flavipes —, H. lineiventris -·-, Neon rayi - -



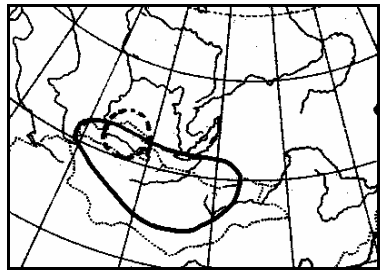
Map 173. Pellenes ignifrons —, P. limbatus - -



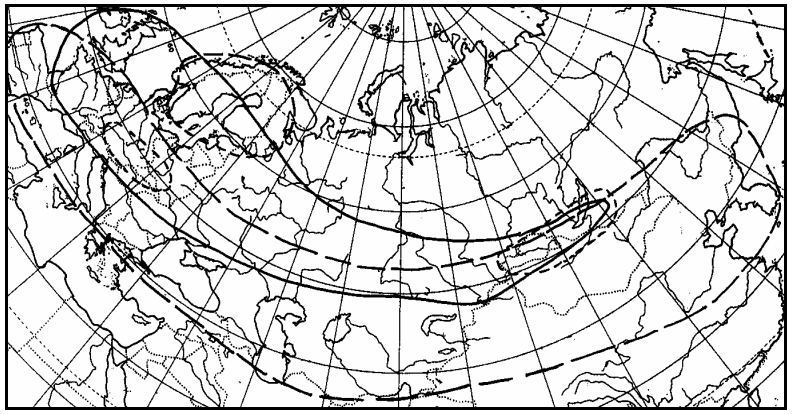
Map 174. Pellenes pulcher —, P. sibiricus - -



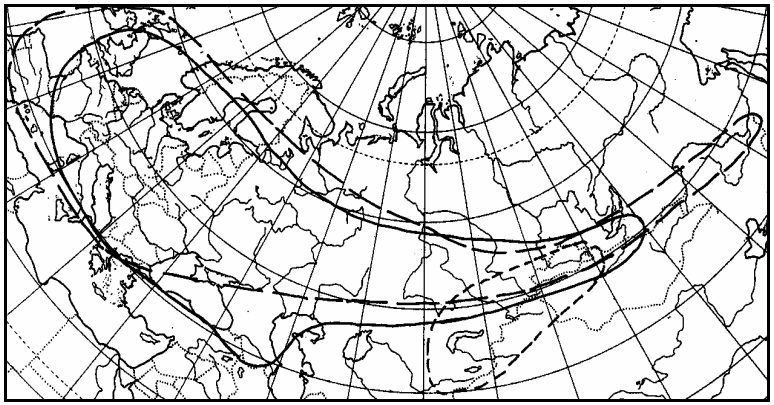
Map 175. Phlegra profuga —, Sitticus albolineatus - -



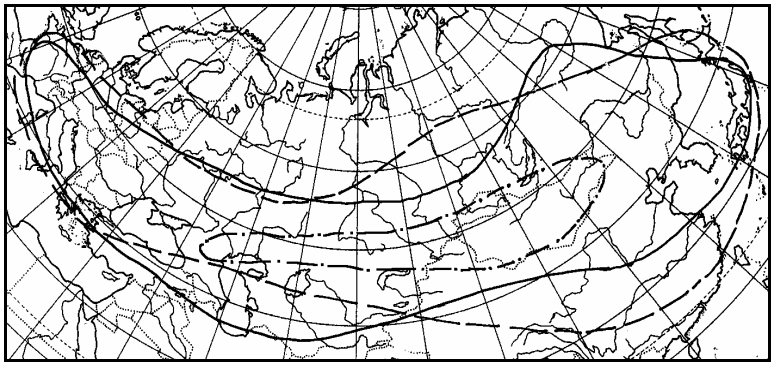
Map 176. Sitticus tannuolana - -, Yllenus kulczynskii —



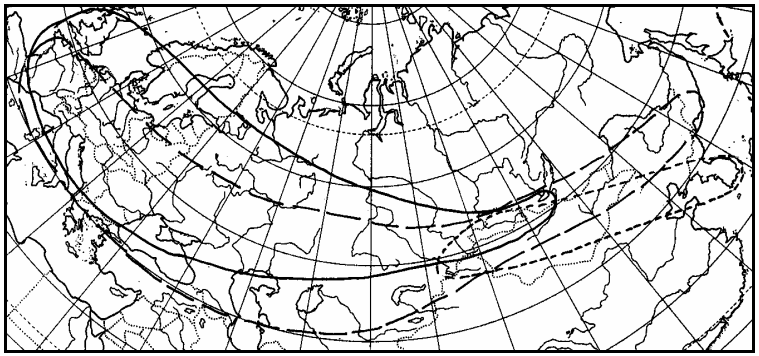
Map 177. Marpissa radiata —, Pellenes lapponicus - -, Philaeus chrysops – –



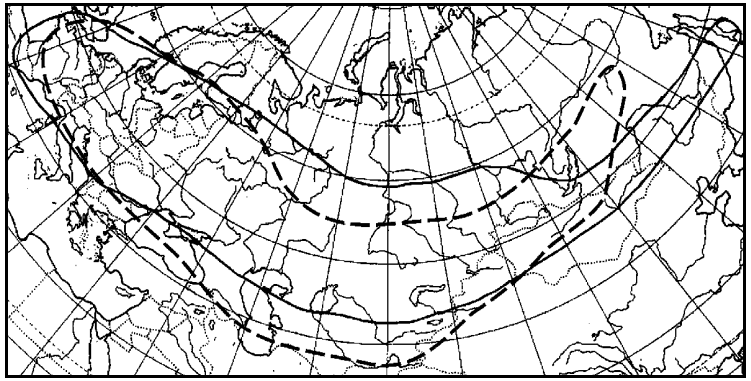
Map 178. Pseudoeuophrys erratica —, Salticus cingulatus – –, Sitticus mirandus - -



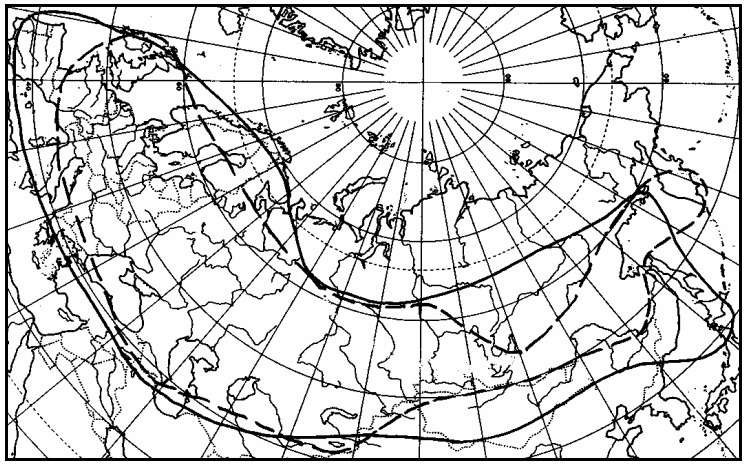
Map 179. Sitticus distinguendus —, S. penicillatus - -, Yllenus mongolicus -·-



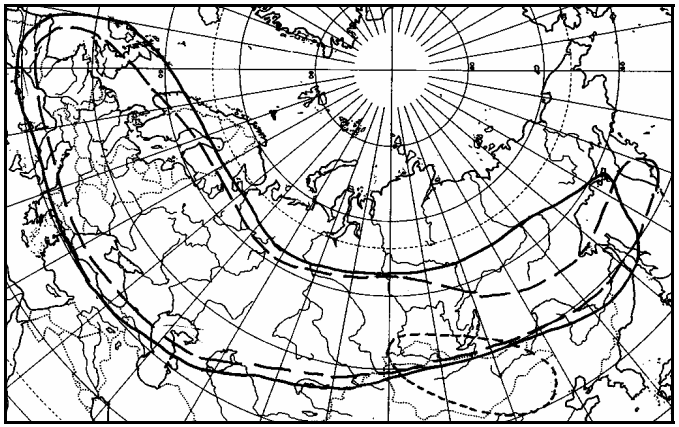
Map 180. Sitticus saltator —, Synageles hilarulus – –, Yllenus coreanus - -



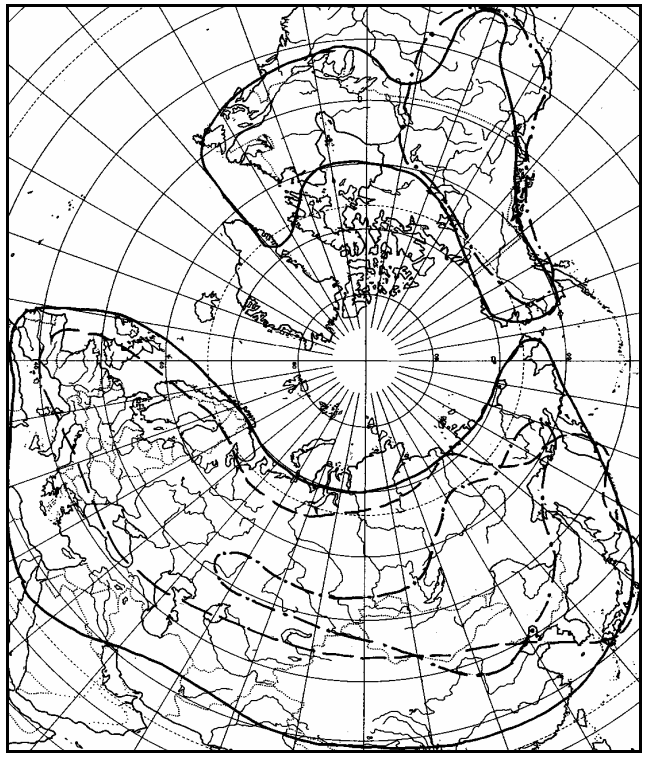
Map 181. Synageles venator —; Talavera aequipes - -



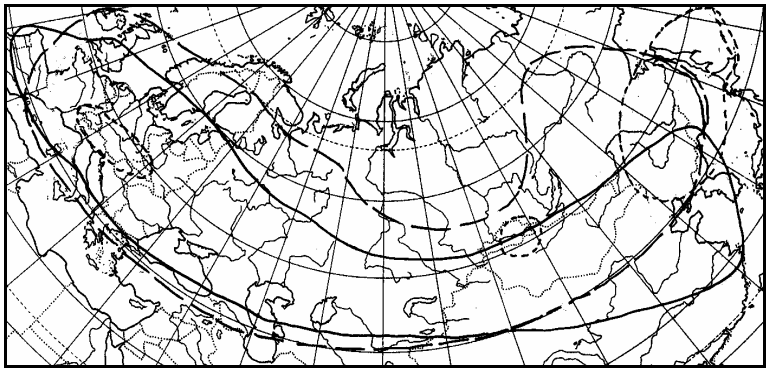
Map 182. Sitticus floricola —, Pachygnatha degeeri - -



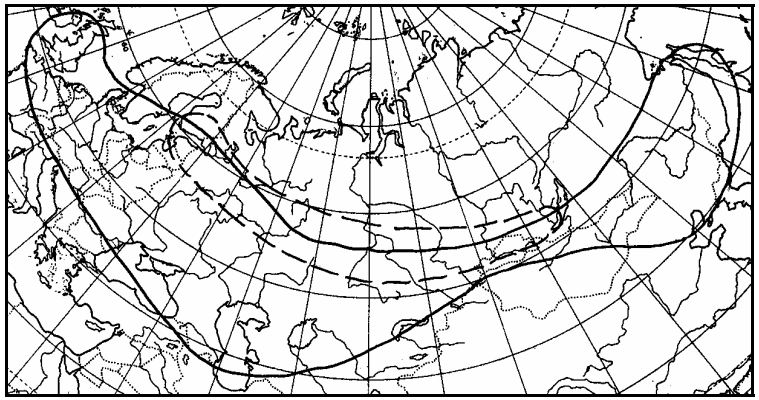
Map 183. Pachygnatha listeri —, Tetragnatha obtusa – –, Enoplognatha gramineusa - -



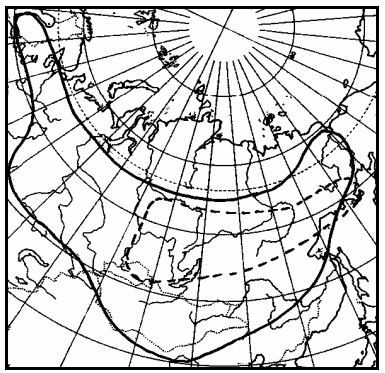
Map 184. Tetragnatha extensa —, T. pinicola - -, Arctachaea nordica - -



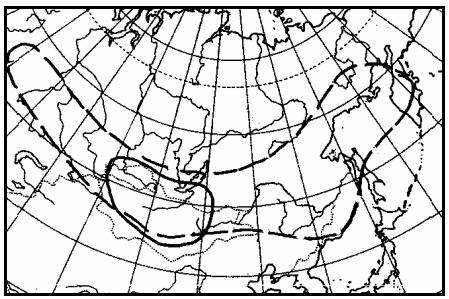
Map 185. Tetragnatha nigrita —, Robertus ungulatus - -, Steatoda phalerata – –



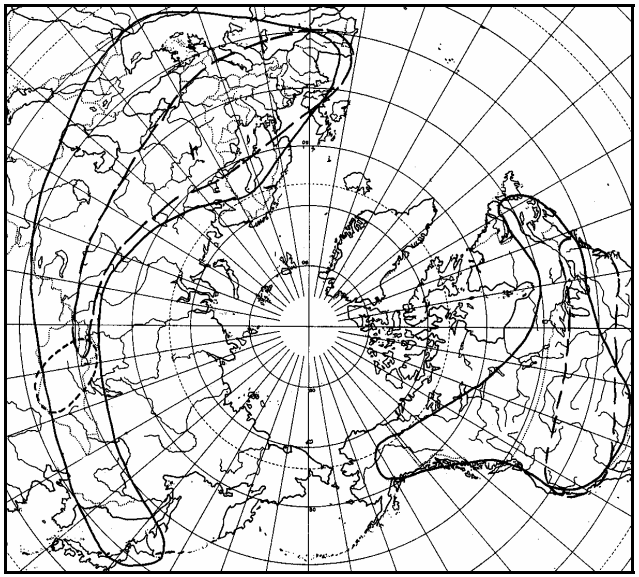
Map 186. Achaearanea riparia —, Theridion palmgreni - -



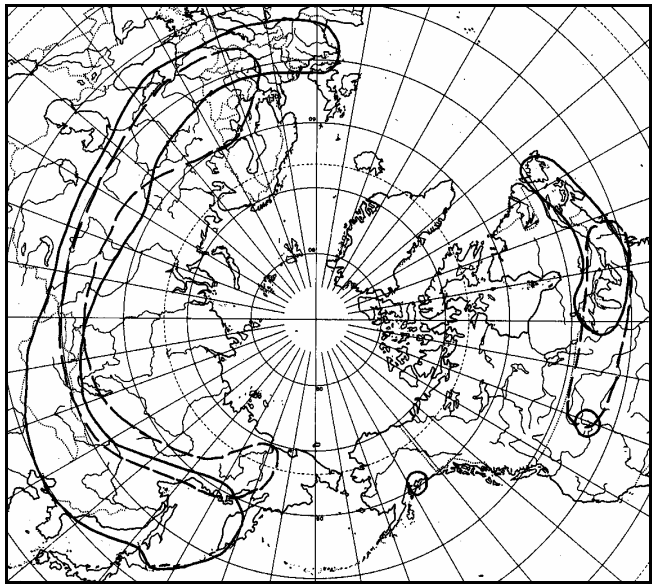
Map 187. Enoplognatha serratosignata —, Robertus kastoni - -



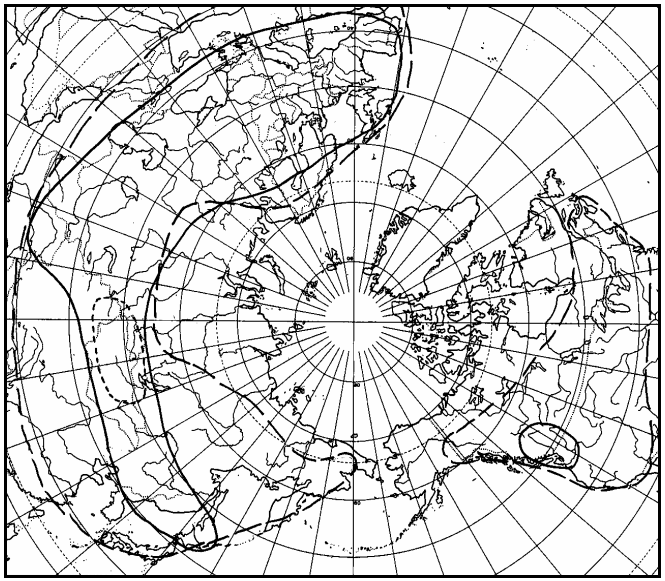
Map 188. Steatoda cf. triangulosa —, Theridion sibiricum - -



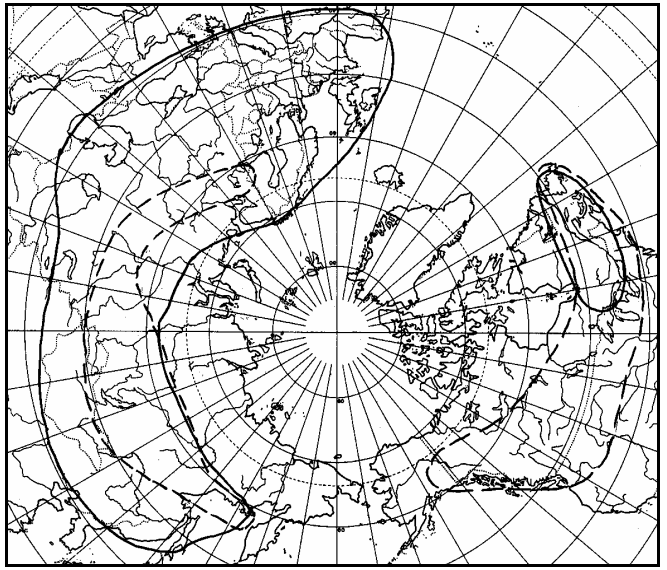
Map 189. Crustulina sticta —, Dipoena prona – –, Euryopis levii - -



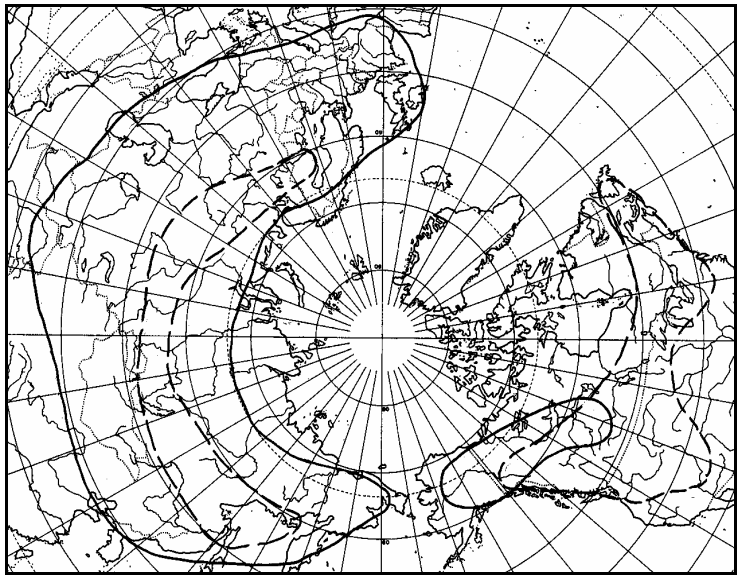
Map 190. Enoplognatha caricis —, Euryopis saukea - -



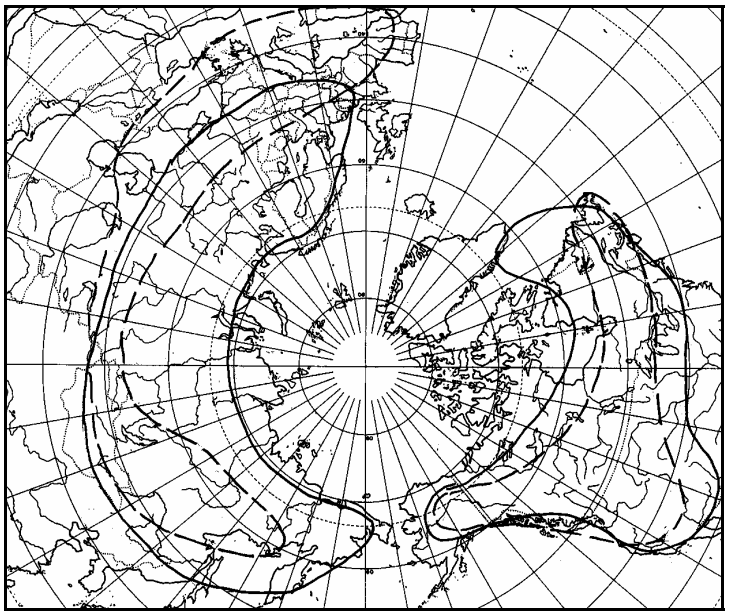
Map 191. Neottiura bimaculata —, Steatoda albomaculata – –, Theridion karamensis - -



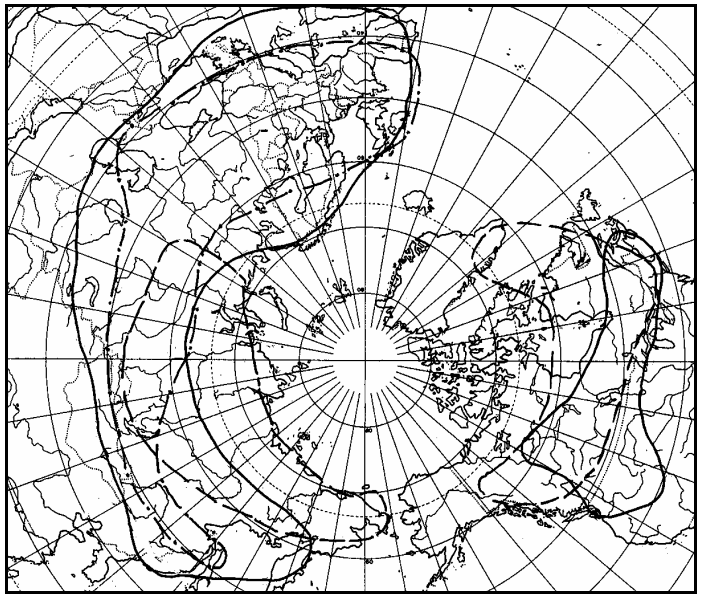
Map 192. Steatoda bipunctata —, Theridion aurantium - -



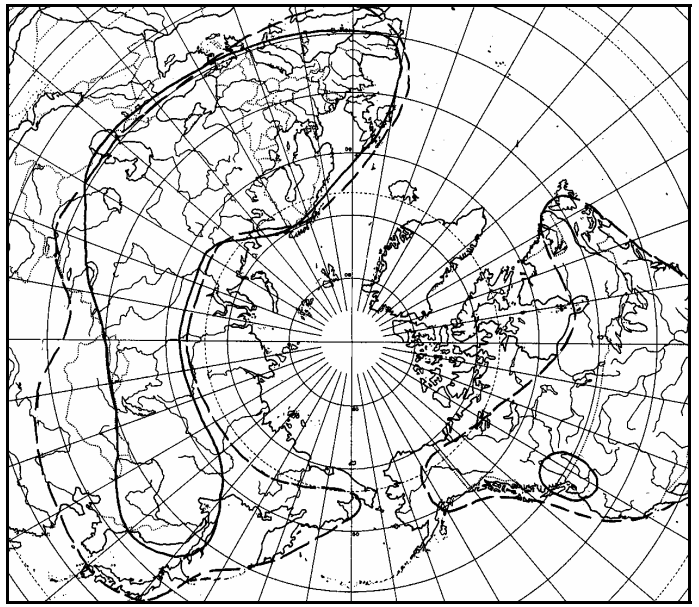
Map 193. Theridion impressum —, Theridion montanum - -



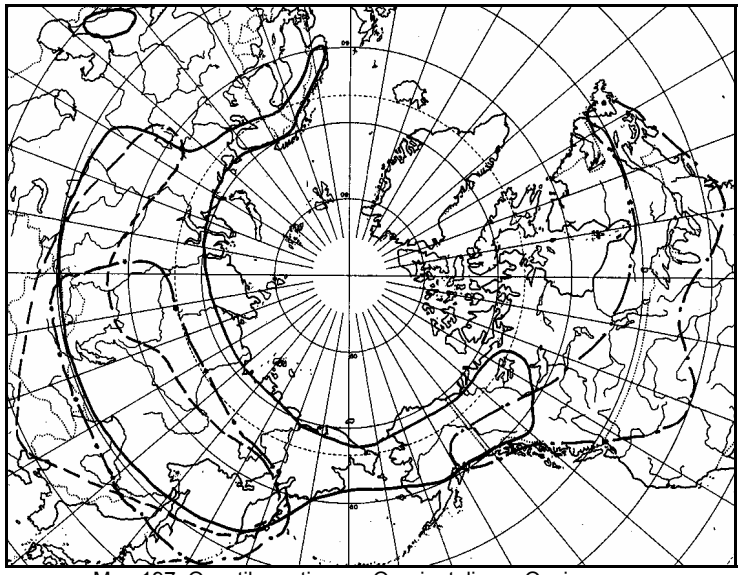
Map 194. Theridion ohlerti —, Theridion petraeum - -



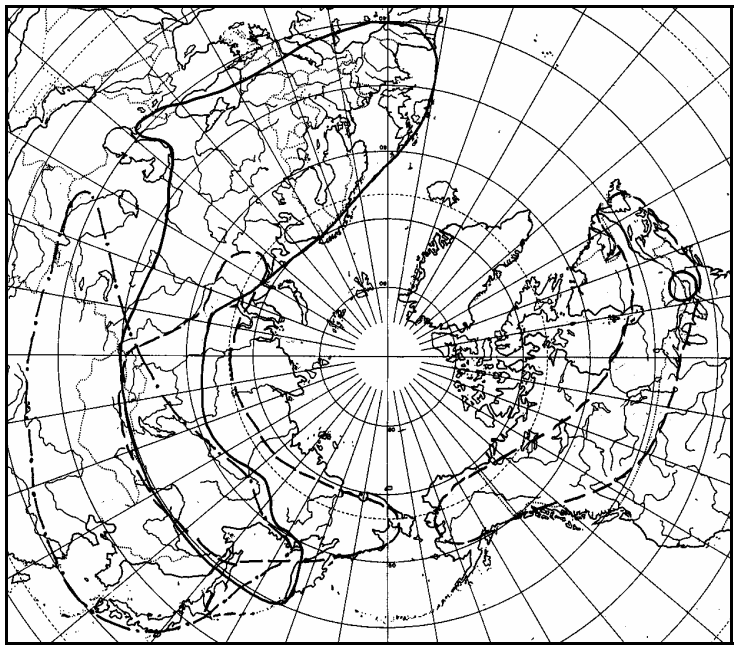
Map 195. Theridion pictum —, Thymoites oleatus - -,
Coriarachne depressa --



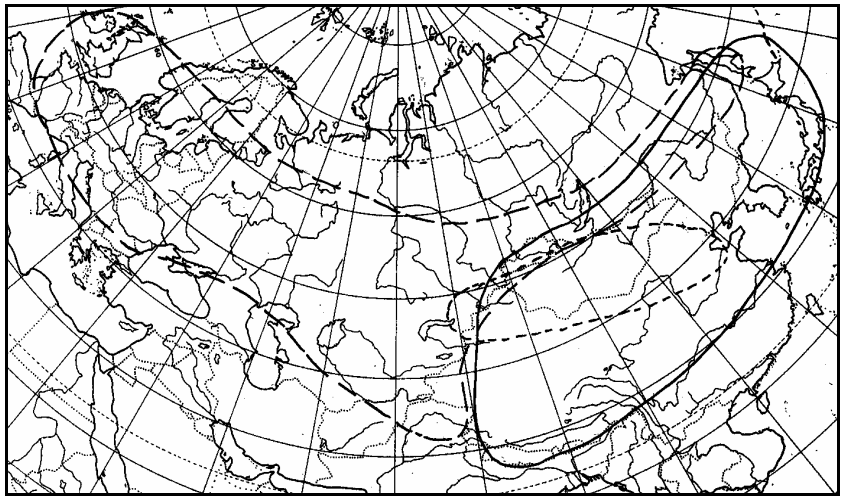
Map196. Theridion varians —, Misumena vatia - -



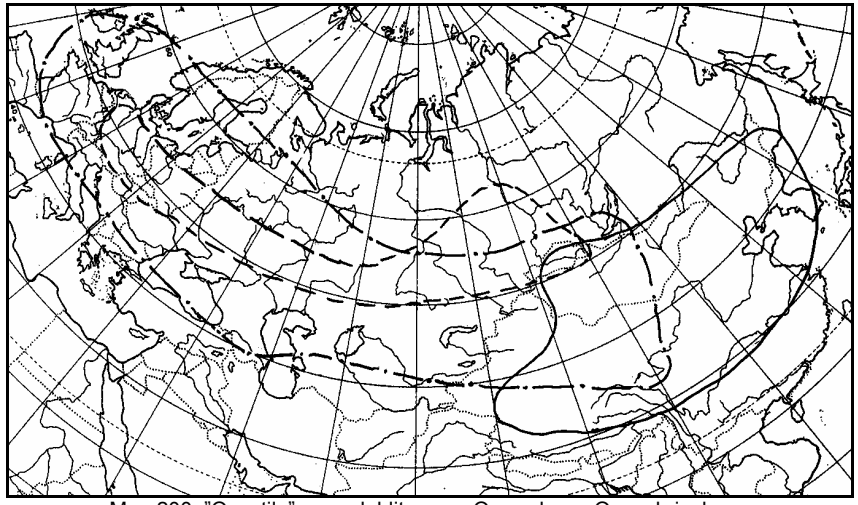
Map 197. Ozyptila arctica —, O. orientalis - -, O. sincera -·-



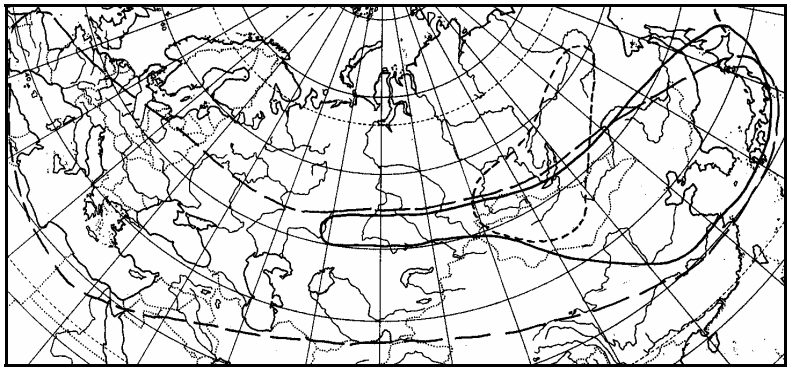
Map 198. Ozyptila trux —, Xysticus britcheri - -, X. ephippiatus -·-



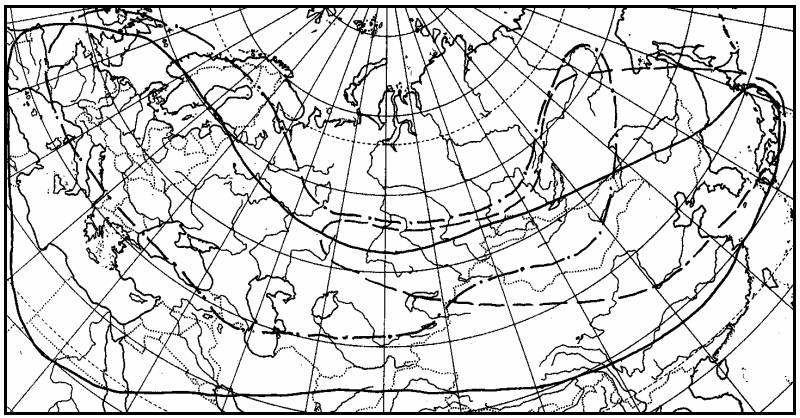
Map 199. Lysiteles maius —, Ozyptila atomaria – –, "O." inaequalis - -



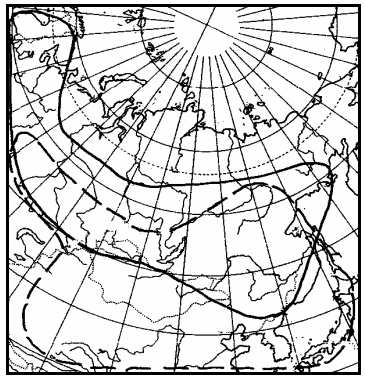
Map 200. "Ozyptila" pseudoblitea —, O. rauda - -, O. scabricula -·-



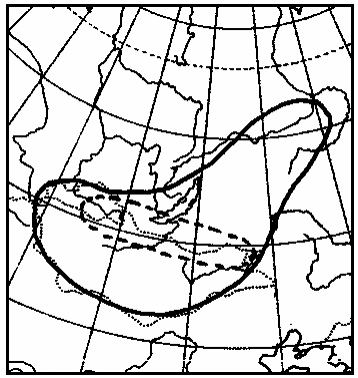
Map 201. Pistius undulatus —, Synaema globosum – –, Xysticus austrosibiricus - -



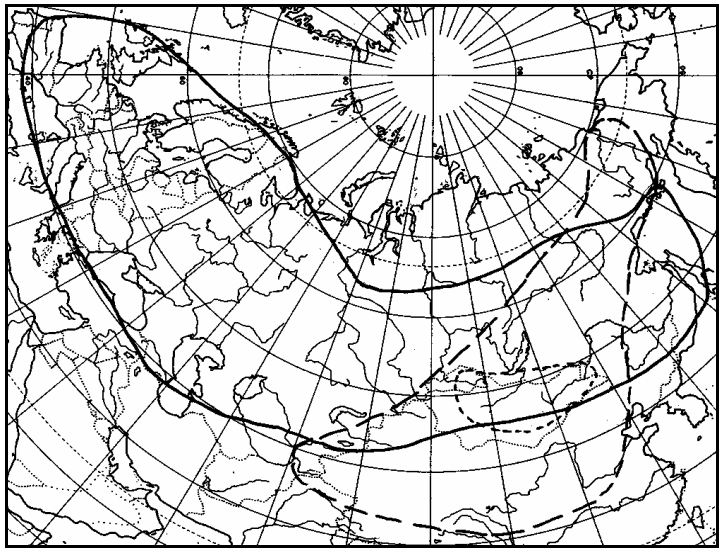
Map 202. Thomisus albus —, Tmarus rimosus - -, Xysticus bifasciatus -·-



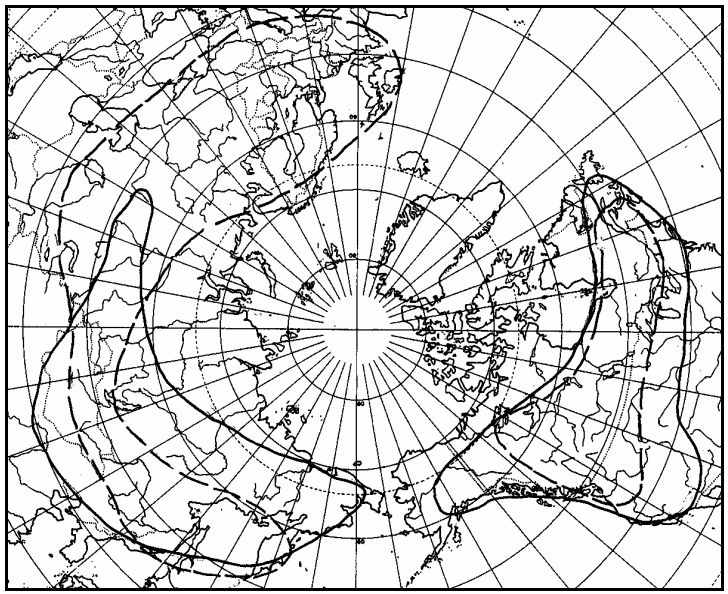
Map 203. Thymoites bellissimum —, Heriaeus melloteei - -



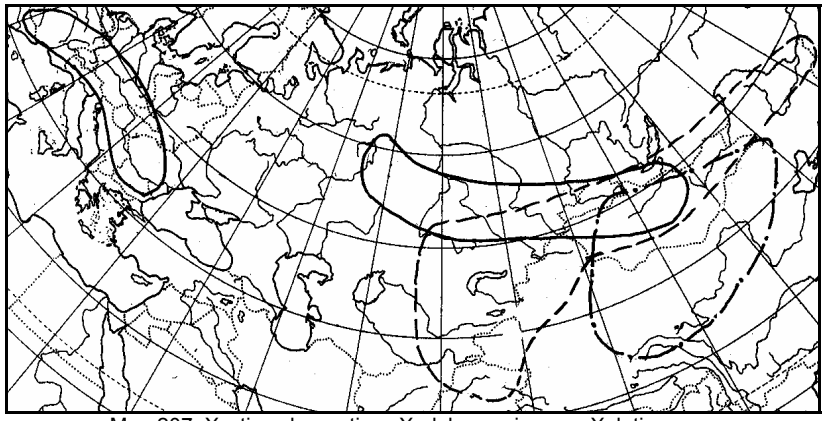
Map 204. Xysticus nenilini —, X. sharlaa - -



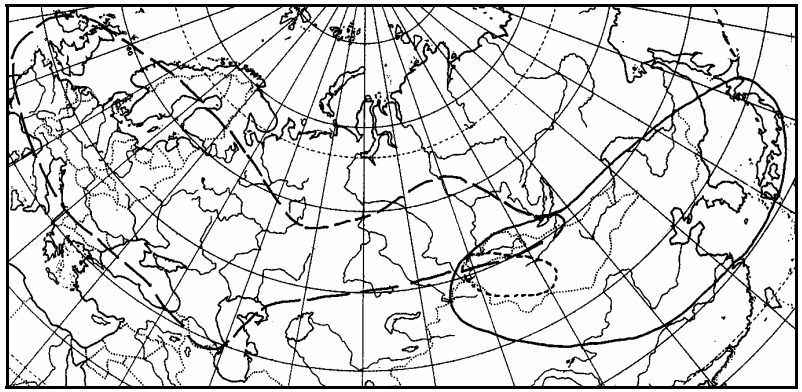
Map 205. Xysticus audax —, X. baltistanus – –, X. seserlig - -



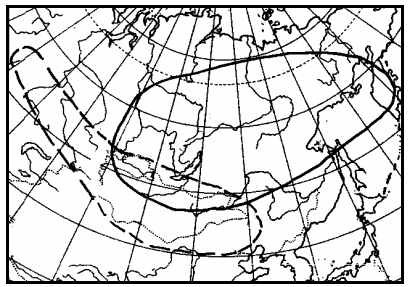
Map 206. Xysticus emertoni —, X. luctuosus - -



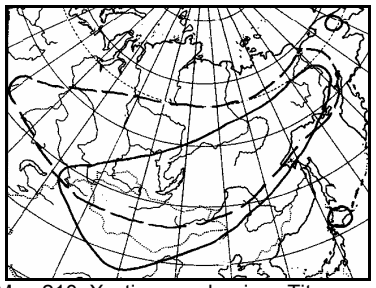
Map 207. Xysticus bonneti —, X. dzhungaricus - -, X. laticeps -·-



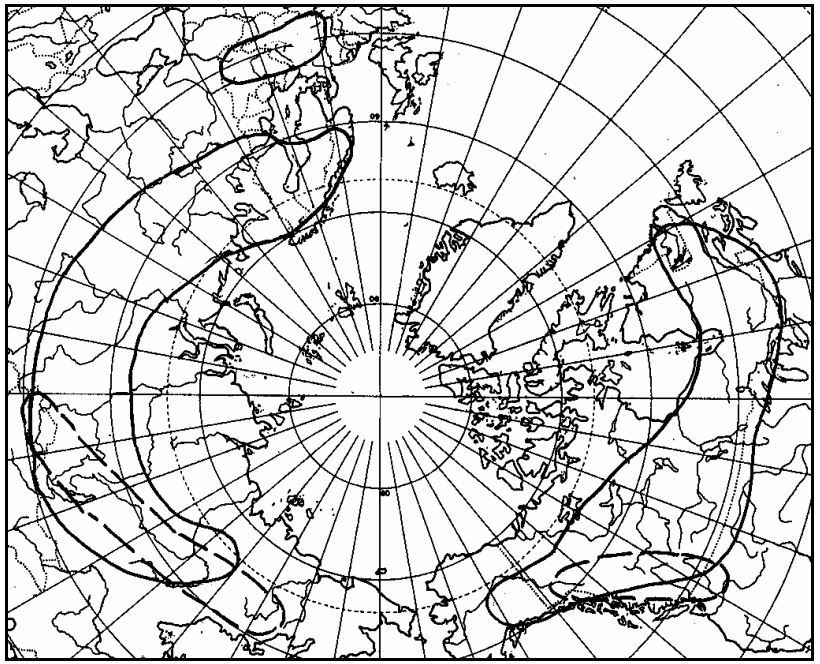
Map 208. Xysticus hedini —, X. lineatus – –, X. mugur - -



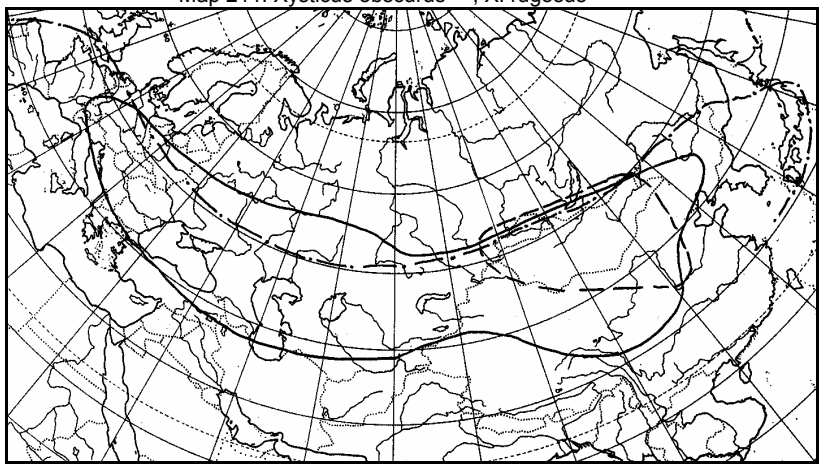
Map 209. Xysticus sibiricus —, X. sjostedti - -



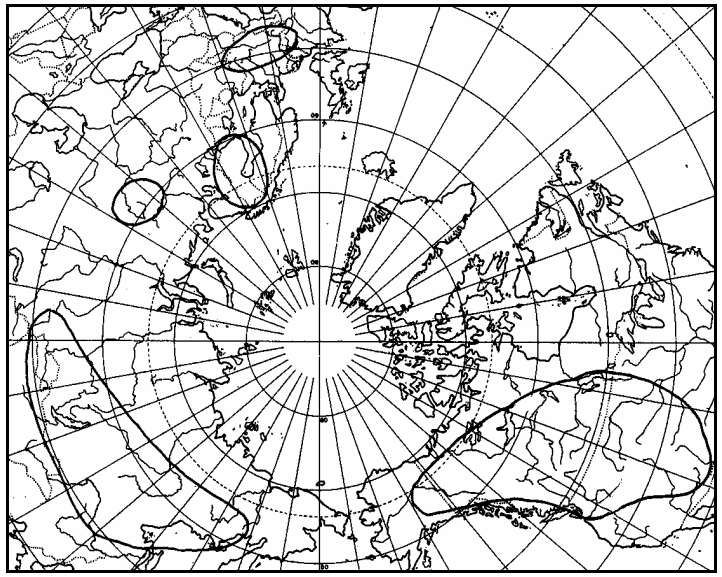
Map 210. Xysticus vachoni —, Titanoeca sibirica - -



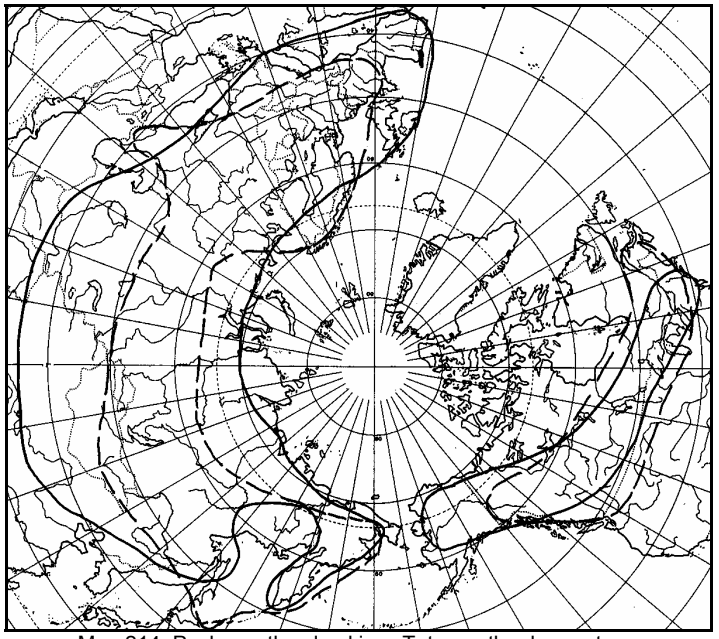
Map 211. Xysticus obscurus —, X. rugosus - -



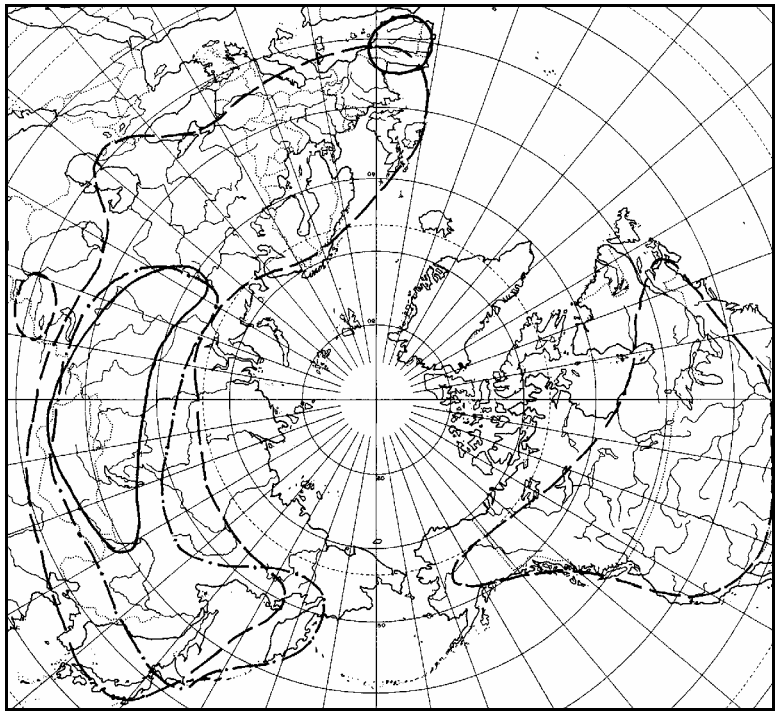
Map 212. Xysticus striatipes —, Titanoeca asimilis - -, Uloborus walckenaerius (northern limit only) -·-



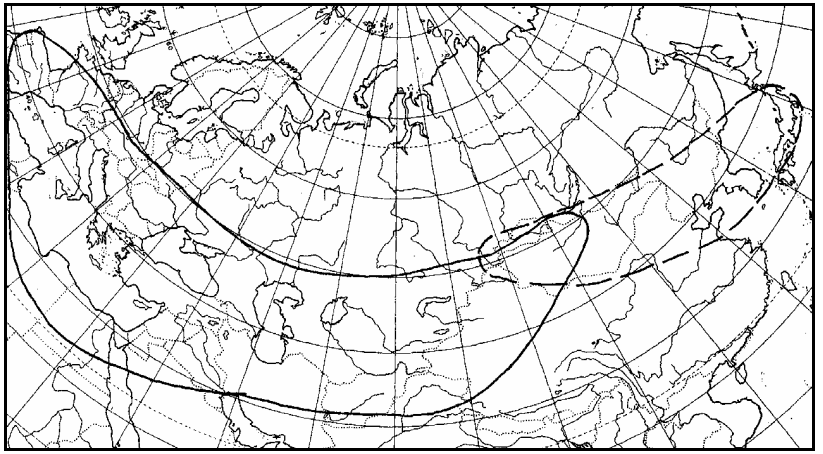
Map 213. Titanoeca nivalis



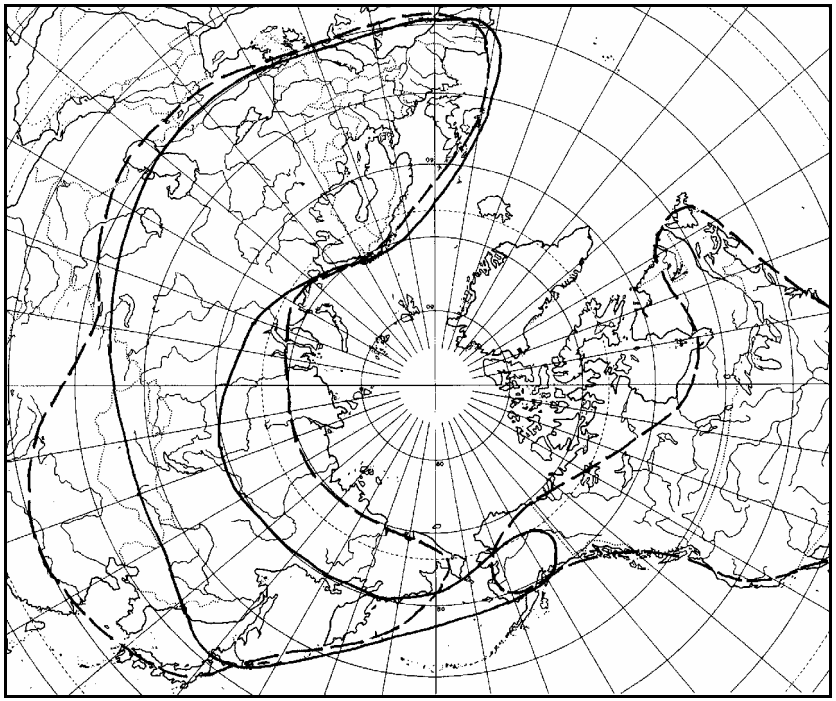
Map 214. Pachygnatha clercki —, Tetragnatha dearmata - -



Map 215. Evarcha michailovi —, “Lepthyphantes” luteipes -·-,
Microneta viaria - -



Map 216. Cyclosa cf. oculata - -, Larinioides folium —



Map 217. Larinioides cornutus - -, Robertus lividus .—

6. Zoogeographical analysis

6.2. Geographical distribution

Comparison of species richness

The structure and composition of the Tuvan fauna was compared with adjacent and distant Holarctic faunas. Faunas of Washington State (Crawford, 1988), Czechia (Check-list, 1999), Alaska (personal data), British Columbia (West et al., 1984), and Yukon (Dondale et al., 1997) are figured only for comparison of structure (species number). Figures for other areas compared are from updated versions of check-lists of Middle Siberia (Eskov, 1988c), Magadan Area (Marusik et al., 1992a), Yakutia (Marusik et al., 1993), Altai (Marusik et al., 1996) and Finland (Palmgren, 1977). Data on Xinjiang was compiled from Song et al. (1999). The list of South Transbaikalian spiders is from our unpublished data and based mainly on the spider faunas of Sokhondo and Dahurian Reserves. Information about Mongolian spiders was taken from our work (Marusik & Logunov, in preparation) on the Mongolian spider fauna.

Table 1. Structure of 14 Holarctic spiders faunas (only species-rich families are shown)

	Czechia	%	Finland	%	Xinjiang	%	Altai	%	Middle Siberia	%	Tuva	%
Araneidae	40	5	31	5	27	11	18	6	16	4	30	5
Clubionidae	25	3	17	3	3	1	9	3	10	2	13	2
Dictynidae	20	2	16	3	8	3	6	2	7	2	20	3
Gnaphosidae	70	9	42	7	46	19	37	13	16	4	72	12
Hahniidae	9	1	7	1	?		2	1	6	1	2	0
Linyphiidae	295	36	282	45	37	15	96	34	283	66	223	36
Liocranidae	14	2	10	2	?		2	1	3	1	3	0
Lycosidae	61	8	48	8	43	18	26	9	43	10	56	9
Philodromidae	20	2	15	2	13	5	12	4	7	2	31	5
Salticidae	60	7	40	6	31	13	24	9	21	5	62	10
Tetragnathidae	18	2	15	2	3	1	7	3	6	1	9	1
Theridiidae	64	8	43	7	22	9	20	7	15	3	37	6
Thomisidae	22	3	26	4	20	8	18	6	17	4	40	6
Total number	810	89	620	95	243		280	99	430		620	96

The Tuvan fauna is the richest of all the known areas east of the Urals and north of 45ºN latitude. Greater species diversity of the Urals fauna (not shown in the table), ca 800 species (Esyunin & Efimik, 1996) is easily explicable by the much larger size and wide zonal range of the area (from 52ºN to almost 70ºN). By several parameters such as species number in each family, and value of each family, the Tuvan fauna is most similar to that of Mongolia. If incompleteness of knowledge of some faunas is taken into account, it is easy to see that all Palaearctic faunas are more or less similar, while temperate faunas of North America (British Columbia and Washington State) have a disproportionally high number of Dictynidae, and smaller (in comparison with faunas of the same latitude in Eurasia) proportion of Gnaphosidae and Lycosidae. European faunas have high value of Theridiidae in comparison to Siberian faunas.

Similarity of the faunas

Eight areas with more or less distant Palaearctic faunas: Altai (Alt), Xinjiang (Xin), Middle Siberia (Msi), Mongolia (Mon), South Transbaikalia (STr), Yakutia (Yak), Magadan Area (Mag), and Finland (Fin), were compared with that of Tuva (Table 2). While some of

Mongolia	%	S. Transbaikalia	%	Yakutia	%	Magadan	%	Alaska	%	Yukon	%	B.Columbia	%	Washington	%
34	6	20	6	18	4	20	4	15	4	16	5	28	5	23	3
13	2	?		8	2	11	2	11	3	9	3	15	3	14	2
13	2	?		13	3	16	3	9	3	9	3	22	4	60	8
89	16	32	9	33	8	31	6	19	6	23	8	46	8	46	6
1	0	1	0	1	0	4	1	7	2	4	1	12	2	14	2
185	34	93	26	193	47	333	60	175	52	140	46	194	34	286	38
5	1	1	0	1	0	2	0	2	1	1	0	5	1	11	1
60	11	30	8	39	10	35	6	36	11	33	11	46	8	39	5
30	5	?		20	5	17	3	9	3	14	5	30	5	30	4
68	12	28	8	29	7	29	5	8	2	13	4	34	6	61	8
9	2	4	1	5	1	7	1	8	2	4	1	15	3	18	2
25	5	4	1	18	4	26	5	12	4	14	5	42	7	52	7
42	8	2	1	25	6	18	3	14	4	18	6	30	5	30	4
549		360	60	409	99	556	99	339	96	304	98	572	91	760	90

these areas are not properly studied (Altai, Xinjiang, S Transbaikalia) and therefore number of species recorded from there is less than half of that of Tuva, it is possible to make some conclusions on the base of comparison of selected families.

As expected, spider fauna of Tuva is most similar to that of adjacent Altai (75%) and to S Transbaikalia (70%) lying at the same latitude. At the same time, it was found that the adjacent faunas of Tuva and Middle Siberia are less similar than the widely separated Tuvan and Yakutian faunas (similarity 57% and 62% respectively). While the distance from Tuva to Finland and to the Magadan Area is subequal, similarities between Siberian faunas are higher. The weakest level of similarity was found between Tuva and closely separated Xinjiang.

The high level of similarity with South Siberian faunas is caused chiefly by the method of calculation and rather small number of species, in comparison with Tuva, found there. In absolute figures, the number of species Tuva has in common with Mongolia is about 350, with Magadan 275, with Yakutia and Middle Siberia 260, and with Finland 245. The same figure for Altai is only 215 species, or 3/4 of theAltaian fauna, and 154 for southern Transbaikalia.

Very few species are common to all 9 faunas. Only five species, four of which have
Holarctic distributions were found in all areas. 13 species were recorded for 8 of 9 faunas.

Table 2. Similarity of Tuvan fauna to some Asian and Finnish faunas (the total fauna and species-rich families).

Family (total number of spp in faunas compared)	Mon	Alt	MSi	Yak	STr	Xin	Mag	Fin
all families	0.64	0.75	0.57	0.62	0.70	0.34	0.50	0.40
Araneidae (67)	0.77	0.89	0.63	0.78	0.65	0.44	0.70	0.57
Clubionidae (29)	0.62	0.78	0.70	0.50	?	0.67	0.55	0.70
Dictynidae (43)	0.77	0.83	0.86	0.76	?	0.38	0.69	0.56
Gnaphosidae (190)	0.72	0.65	0.81	0.82	0.78	0.32	0.74	0.55
Linyphiidae (654)	0.56	0.76	0.66	0.50	0.66	0.46	0.54	0.44
Lycosidae (183)	0.70	0.77	0.53	0.49	0.80	0.30	0.51	0.43
Philodromidae (52)	0.75	0.83	1.00	0.75	?	0.30	0.76	0.80
Salticidae (134)	0.50	0.75	0.80	0.79	0.68	0.42	0.79	0.43
Tetragnathidae (21)	0.55	1.00	1.00	1.00	1.00	0.33	1.00	0.89
Theridiidae (81)	0.80	0.65	0.60	0.83	?	0.32	0.73	0.43
Thomisidae (84)	0.60	0.83	0.70	0.72	?	0.35	0.78	0.42

The distribution patterns of the studied species can be grouped into 15 types:

1) Holarctic (*e.g.* map 4), with variations: circum-, subcircum-, disjunctive and trans-Palaearctic-Alaskan.

2) Trans-Palaearctic (*e.g.* map 10), with variations: disjunctive.

3) Euro-Lena or Euro-Yakutian (7 species only, map 44 *Micaria guttulata*),

4) Euro-Baikalian (Tuvan or Mongolian) (*e.g.* map 37 for *Gnaphosa leporina* or map 43 for *Haplodrassus cognatus* and *Micaria fulgens*)

5) Euro-Yenisei (*e.g. Troxochrus scabriculus*, map 131), this is almost the same as Euro-Tuvan range, but species are found further to the north of Tuva.

6) Asian (from Caucasus to Far East), (*e.g. Bianor inexplorator* (map 131), *Ozyptila orientalis* (map 197).

7) Siberio-American or Siberio-Nearctic (*e.g. Aculepeira carbonarioides* (map 2), *Clubiona riparia* (map 18), *Drassodes neglectus* (map 27), some of these ranges cover only the western part of North America, or the northwestern part (Alaska and Yukon Territory).

8) Trans-Siberian species are distributed from the Urals to the Pacific Coast (*e.g. Anguliphantes dybowskii* (map 64), *Erigone hypoarctica* (map 80), *Monocerellus montanus* (map 99).

9) Siberian species are distributed in Siberia east of the Yenisei (*e.g. Clubiona intejecta* (map 6), *Parasyrisca tyshchenkoi* (map 55) or occur from the Urals to Baikal or Yakutia (*e.g. Araeoncus vorkutensis* (map 60).

10) Siberio (Mongolo)-Manchurian, means species are distributed from Tuva (or Altai, or East-Kazakhstan Area) via south Siberia to «Manchuria» (area south of Amur River and east of 120ºE) (*e.g. Araniella yaginumai* (map 3), *Phrurolithus sinicus* (map 137), *Alopecosa cinnameopilosa* (map 140).

11) Himalayan-Siberian (Mongolian), means species are distributed from the Himalayas to South Siberia (*e.g. Micaria pulcherrima* (map 49) or even to NE Siberia (e.g. *Zelotes balstitanus* (map 47) and *Xysticus baltistanus* (map 205).

12) West Siberian, means species are distributed from the Urals to Tuva or Cisbaikalia (*e.g. Centromerus clarus* (map 67), *Silometopus uralensis* (map 122).

13) Yenisei, means species known only from Yenisei River basin (*e.g. Diplocephalus cristatus angusticeps* (map 69).

14) Mongolian, means species are distributed from the East-Kazakhstan Area to Buryatia, south to Xinjiang and Inner Mongolia. Few species have pure trans-Mongolian range (eg. *Pardosa cf. paratesquorum* (map 145) while distribution of several trans-Mongolian species extends to «Manchuria» (*e.g. Xysticus hedini* (map 208). Many species occur in only part of «Mongolia» (*e.g.* maps 21-22, *Acantholycosa sterneri* (map 140)

15) Tuvan, means that a species was not found outside of Tuva.

Zoogeographical surveys of families

Araneidae

Thirty one species of araneid spiders are known from Tuva. This is a high number, the same as for the Finnish fauna (31) and comparable with that of Mongolia (34). The diverse fauna of Washington State (Crawford, 1988) includes fewer araneids than Tuva, only 23.

The Tuvan araneid fauna is most similar to that of Altai, and rather similar to the faunas of eastern Siberia and Mongolia.

	Holarctic	Trans-Palaearctic	Euro-Mongolian	Siberio-American	Siberian	Mongolo-Manchu-rian	Mongolian & Tuvan	
poly-zonal	H.pygmaea L.cornutus	H.albovittata H.sanguinea						4 13%
hypoarcto-boreal				A.carbonar				1 4%
boreo-nemoral	A.packardi A.marmoreus A.nordmanni A.displicata A.proxima C.prominens C.conica	A.alsine A.quadratus S.nitidula Z.stroemi	A.sturmi		A.cf.carbona		?Atea sp.	13 43%
nemoral & steppe		N.adianta -A.pallasi-* --A.strandiell--	A.grossus L.folium			A.yaginumai A.schrenkii C. cf.oculata L.bossae	A.mongolicu A. cf.saevus G.hetian	12 40%
	9 (32%)	7 (25%)	3 (11%)	1 (4%)	1 (4%)	4 (14%)	3 (11%)	30

The majority of species (16) found in Tuva have wide, circum-Holarctic or trans-Palaearctic ranges. The number of Siberian and Siberio-American species is very low (4%) in comparison with other families. The value of endemic species is also very low (11%), about the same as in Thomisidae and Clubionidae. Percentage of Siberian species is one of the lowest within the large families (4%).

Two related species, *"A." pallasi* and *"A." strandiellus*, have unusual and unique ranges that can be called Central Palaearctic (from Ukraine to Mongolia) or Central Asian respectively. All four species with Siberio-Manchurian range can be called as Mongolo-Manchurian, because their ranges and habitat preference do not extend beyond temperate forests and/or steppe and meadow communities.

In respect to zones boreo-nemoral species predominate. All Mongolian endemics are restricted to xeric communities.

Clubionidae

Thirteen species of *Clubiona sensu lato* are known from Tuva. *Cheiracanthium* was not included because this genus is not confamiliar with *Clubiona*. We list them in their traditional place in the Clubionidae as their family placement is doubtful. The number of clu-

* hyphen mark (or "+") left or right of the species name means that distribution west or east (respectively) of Tuva is does not cover whole area (or slightly extend).

bionids in Tuva is similar to that of other faunas from east of the Urals to western America. European faunas, even northern, such as Finland, have higher species diversity.

The clubionid fauna of Tuva is most similar to that of Altai, and close in species composition to those of adjacent Middle Siberia and distant Finland. In comparison to other families, there is a high similarity between Tuva and Xinjiang. This effect is caused by small number of species found in NW China.

The majority of species found in Tuva (61%) are found only in Eurasia. There is only one endemic species and one Siberian species. Ranges of most species lie in the boreo-nemoral and nemoral zones.

	HOLARCTIC	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	Mongolian & Tuvan	
Boreal		C.DIVERSA		C.latericia--	C.INTERJECTA		3 23%
Boreo-nemoral	C.kulczynski C.lutescens	C.caerulescens C.phragmitis	C.stagnatilis	C.riparia		C.pseudosax	7 54%
Nemoral & steppe	C.pallidula	C.neglecta	C.SUBSULTANS				3 23%
	3(23%)	4 (30%)	2 (15%)	2 (15%)	1 (8%)	1 (8%)	13

DICTYNIDAE

Twenty dictynid species are represented in the Tuvan fauna. It seems to be one of the most diverse faunas in Palaearctic. Temperate areas in the Nearctic have much higher species richness.

	Holarctic	Trans-Palearctic	West Siberian	Mongolian & Tuvan	
Polyzonal	D.arundinacea D.major	A.consecuta			3 15%
Hypoarcto-boreal (boreo-montane	A.lapponica A.prominula				2 10%
Boreal	D.alaskae	D.pusilla- D. cf. schmidti			3 14%
boreo-nemoral	E.annulipes	D.uncinata			2 10%
nemoral & steppe		L.stigmatisata	D.tenella	-Argenna sp.- -D.uiensis -D.obydovi- D.sotnik- D.ubsunuric a -D.uvs- E.logunovi E.mongolica	10 50%

	6 (30%)	5 (25%)	1 (5%)	8 (40%)	20

Species composition of the Tuvan fauna is most similar to that of Middle Siberia (83%), and in fact only one species occurring in Middle Siberia, *D. mitis* Thorell, 1875, was not found in Tuva.

About half of species have wide ranges, Holarctic or Palaearctic, but the other half have very small ranges limited to Western Siberia, Tuva or Mongolia. Value of endemic species in Dictynidae is highest (40%) among all families. Half of the species are restricted to xeric (steppe and semidesert) communities, and a high proportion of species have poly-zonal distribution.

Gnaphosidae

Gnaphosidae is the second largest family in Tuva, and includes 72 species. Its species number is the second biggest in Asia, and third within all areas compared.

The Tuvan fauna is most similar to that of Yakutia (82%) and rather similar to other faunas east of Yenisei. Only a few species distributed in hypoarctic and boreal zone of Siberia were not found in Tuva (*Gnaphosa orites* Chamberlin, 1922, *G. similis* Kulczyński, 1926, *Haplodrassus hiemalis* (Emerton, 1919), *H. belgeri* Ovtsharenko et Marusik, 1988, *Parasyrisca holmi* Ovtsharenko et al., 1995). The Tuvan fauna incorporates almost all the diversity of Siberian fauna, and at the same time clearly differs from faunas lying west of Yenisei.

Several genera have their highest species diversity for latitude in Tuva: *Berlandina* (3), *Drassodes* (9), *Gnaphosa* (15), *Haplodrassus* (6). *Micaria* (15) has the greatest species diversity at least in the Palaearctic, and *Parasyrisca* (8) appears to have the highest diversity in the Holarctic.

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	Siberio-Manchurian	Mongolian& Tuvan	
polyzonal	H.signifer	C.nocturna M.lenzi		D.neglectus Z.fratris	G.gracilor			56 8%
hypoarcto-boreal	G.microps M.alpina	G.incospecta G.nigerrima G.sticta		G.borea	P.tyschenkoi		G.cf.orites	8 11%
boreal	-M.tripunctata			Z.sula	G.chola			3 4%
boreo-nemoral	G.muscorum M.aenea M.pulicaria -M.rossica Z.puritanus	D.cupreus D.villosus H.cognatus H,moderatus H.soerenseni -U.yutian-	G.leporina M.guttulata-		+Z.baltistanus	G.mandschur H.pugnans Z.potanini	G.pseudolep	18 25%

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	Siberio-Manchurian	Mongolian& Tuvan	
nemoral & steppe		D.pusillus D.vinealis G.mongolica M.dives P.braccatus Z.exiguus	M.fulgens M.nivosa P.variana			D.lesserti D.serratidens G.licenti	B.potanini B.schenkeli B.ubsunurica D.kaszabi D.longisinus D.pseudoless Drass. sp E.sibiricus G.tuvinica G.wiehlei Haplodras.sp M.cf.lenzi M.mongunic M. cf rossica M.tuvensis P.asiatica P.belengish P.hippai P.logunovi P.potanini P.schenkeli P.ulykpani T.tegulatus Z.barkol +M.pulcherri	37 51%
	9 (12%)	17 (24%)	5 (7%)	4 (6%)	4 (6%)	6 (8%)	27 (38%)	72

In comparison with other families, Gnaphosidae has a relatively small proportion of circum-Holarctic species (13%), but more Transpalaearctic ones (24%). Only a few species have Siberio-American and trans-Siberian distributions. However, the percentage of endemic species is one of the highest (37%): slightly less than in Dictynidae and almost the same as in Lycosidae.

Two species with East Palaearctic distributions, viz. *Gnaphosa mandschurica* and *Zelotes baltistanus*, have very wide latitudinal ranges. The former is distributed from Nepal to Central Yakutia. The latter has a slightly smaller range: from Kashmir to the Polar Circle in NE Yakutia. As well as these two species, some others reach the Himalayas: *Drassodes pseudolesserti* (?), *Haplodrassus signifer*, *Micaria dives,* and *M. pulcherrima*. Four species have Himalaya-Siberian (or Mongolian) ranges.

Almost all the endemic species are restricted to steppe and semidesert communities.

Linyphiidae

According to the number of species and genera this is the largest family in Tuva. While the number of species found is less than in the Magadan Area, Czechia, Finland and Middle Siberia, nevertheless it is the richest fauna at such a latitude. More than two dozen of species belonging to undescribed taxa have not been included in our list. The total number of species living in Tuva could be 250 or even more.

Like the Salticidae, the Linyphiidae has a relatively high proportion of Siberian species. If Siberio-Manchurian, West Siberian species and forms restricted to Yenisei River basin are counted as well, 27% of species have a Siberian type of range.

The similarity of Tuvan linyphiids to other faunas is notably less than the average level of similarity found in other families. The species composition is most similar to adjacent Altai.

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	West Siberia & Yenisei	Siberio-Manchuria	Mongolian & Tuvan	
	1	2	3	4	5	6	7	8	9
Polyzonal	E.atra M.pusilla M.viaria	E.dentipalpi G.dentatum G.rubens			W.korobeini kovi				7 3%
hypoarcto-boreal	H.herniosa H.strandi– L.complicat M.monticol- M.sphagnic O.vaginatus P.variegata- T.aestivus W.questio– W.karpinsk	A.trifurcata P.parallela S.alpigenus S.angulatus	D.decipiens E.remota L.cornutus W.uralensis	A.allosubtili H.sibirica– M.tungusic– P.petrophil- S.alpinus S.protervus-	A.affinisoide A.sibiricus -D.marusiki E.hypoarctic H.mongolica I.incestus- L.laricetoru L.taczanows M.montanus N.jamalensi P.dorniana S.nenilini S.incerta S.sphagnicol T.uralensis			T.sajanensis	40 18%
boreal	B.simillimus C.limnaea D.rectangul M.trifrons T.diversus- W.lepida	A.abiskoens A.beata B.index C.wideri D.borealis P.pini S.latus T.nigriventr T.arcuatus	F.bergstroe	C.dentata– D.video– E.sombra E.simillima G.taczanows H.f.interce– H.gibbosa– H.semiflav– I.sibiricum M.sibiricus P.theridifor -S.marxii W.aurantice	A.pseudosax A.dybowskii A.vorkuten- D.facetum H.minuta H.prolata I.flexilis L.pilipes M.saaristoi O. pseu-doob O.geminus- P.dybowski- P.jeniseica P.miracula V.putoranic Y.xerophili- Z.cf.cultrige	A.levii- A.cerinus- -A.sibiricus C.clarus -D.c.angusti- -L.distichus- -L.terrenus S.uralensis– -T.orientali--		Concav.sp L.sajanensis T.baikalensi W.koenbutje T.cf.orientali	58 27%

boreo-nemoral	A.olivacea A.scopigera B.gracilis C.obscurus D.bidentata D.bifrons E.dentigera E.grandaeva H.jacksoni- K.pullata L.robustum- M.multesi- M.sundevall M.prominul M.impigra M.marginel N.clathrata N.radiata P.phrygianu S.stativa W.capito W.cuspidat-	A.expunctus A.conigera B.setiger B.alticeps C.brevis C.submissa G.rubellum H.bitubercul L.hirsutus M.herbigra N.montana P.tauricorni S.romana T.biovatus T.affinis	A.saltuum A.fuscipalpi A.crassiceps O.agrestis C.distincta+ H.cornutum O.retusus+ S.frontata S.elegans S.conspersu T.thorelli T.scabricolu W.antica	L.cognatu– P.deformis P.kulczynsk W.fraudatri-	L.luteipes P.marusiki? P.unicornis S.sibiricus U.sibirica W.aimakensi s	C.caliginos- O.sajanens- -S.ryvkini-	A.karpins kii ?B.eumen is I.obtusus M.flavesc ens N.asiaticu m	Centrom.sp. E.tuvensis- E.finitimus O.mongole- P.depilis- S.altaicus-	75 35%
nemoral & steppe	P.pumila	H.nigritus N.emphana P.pygmaeu S.pilosus T.cristatus	E.erythropu T.vasconic- T.cito?	D.subrostrat		W.kazakhs--	E.piechok i F.exornata	Agyneta sp. A.birulaiode A.kaszabi- A.oeroegens B.glumacea D.diphyius E.sibiricus Hilaira sp. -I.ancus- I.bonus- I.cf bonus- I.logunovi- I.tuvensis L.kaszabi- L.pepticus P.minor P.palmgreni P.parvicollis Perlonip.sp -S.centrasia- S.transbaica S.logunovi- S.tuvinensi– T.brevispino	37 17%
	42 (19%)	36 (17%)	21 (10%)	24 (11%)	39 (18%)	13 (6%)	7 (3%)	36 (16)	223

Lycosidae

Lycosidae is the fourth largest family in Tuva. Species richness of wolf-spiders is, within the areas compared, one of the highest in the Holarctic. There are few species (7%) with Holarctic distributions. Over half of the species are restricted to the eastern Palaearctic. Most of species inhabit meadow and steppe biotopes.

The species composition of the Tuvan fauna is most similar to adjacent Altai and Mongolia. Of all the families, Tuvan lycosids have the smallest proportion of species in common with the Magadan Area.

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	West Siberian	Siberio-Manchurian	Mongolian & Tuvan	
poly-zonal	A.aculeata			P.tesquo-					2 (4%)
hypoarcto-boreal	P.lapponica - T.alpigena	A.norvegica P.atrata P.eiseni			A.sibirica	- P.chionoph-		A.sterneri P.baraan	9 16%
boreal			P.lasciva		A.albostriat a	-P.oksalai--			3 (5%)
boreo-nemoral	P.palustris-- -	A.lignaria A.cuneata A.pulverule P.plumipes P.schenkeli X.nemoralis	A.pinetoru m P.amentata P.sphagnico lP.hygrophil X.miniata		A.solivaga- P.indecora- P.jeniseica P.praedo	P.oljunae–		P.cf.lappon #2 P.'lugubris'	19 34%
Nemoral & steppe			A.singorien sis A.dimidiata P.bifasciata				A.cinnameo A.licenti P.astrigera .ricta	A.triangulat A.hinganica A.subrufa A.zyuzini A.cf.dimidi a A.cf.dimidi a ?A.cervina E.sibirica P.bukukun P.etsiensis P.incilis P.cf.lappo# P.nenilini P."parates" P.selenegen X.mongolic	23 41%
	4 (7%)	9 (16%)	9 (16%)	1 (2%)	6 (11%)	3 (5%)	4 (/%)	20 (36%)	56

Philodromidae

Twenty-eight species of philodromid spiders are known from Tuva. Tuvan species diversity is second in the Palaearctic only to Mongolia which has two species more. A similarly high level of diversity was recorded in Washington State (Crawford, 1988) and in British Columbia (West et al., 1984).

Thanatus seems to have a higher species diversity in Tuva (10 species) than elsewhere in the Holarctic (*cf.* 6 species in Middle Europe (Heimer & Nentwig, 1992), 9 species in North America (Dondale & Redner, 1978).

The proportion of widespread (Holarctic, Transpalaearctic and Siberio-American) species is more than 60%. The percentage of polyzonal species is highest of all the families.

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	Siberio-Manchurian	Mongolian & Tuvan	
polyz-onal	P.cespitum T.ARCTICUS T.striatus T.maritim			P.alascensis				5 18%
hypoarcto-boreal				T.bungei-	T.tuvinensis			2 7%
boreal		P.fuscomarginat						1 (4%)
boreo-nemoral	P.histrio T.colorade T.oblongus	P.emarginat P.fallax P.margaritat P.poecilus P.rufus	P.praedatus	T.asiaticus	P.a.sibiricus	A.macropalpus		11 40%
nemoral & steppe			P.corticinu T.arenariu			T.coreanus	A.marusiki T.stepposus T.usbunuren T.sp. T.aspersus	9 32%
	7 (25%)	7 (25%)	3 (11%)	3 (11%)	1 (4%)	2 (7%)	5 (18%)	28 (31)

The species composition of the Tuvan fauna is most similar to that of Middle Siberia (in fact all Middle Siberian species were found in Tuva), and next to that of Finland. This is the only case when Tuvan fauna has more similarity with Finnish fauna than with adjacent Altai and Mongolia.

Salticidae

Salticidae is the third largest family in Tuva, and the richest salticid fauna known so far north of 50ºN latitude in the Holarctic. The most plausible explanation of the Tuvan salticid diversity seems to be the unique geographical position of Tuva, as it lies at a "crossroad" of distributions of different faunal elements. For instance, Tuva represents the northeasternmost or easternmost limits for a number of north Turanian species (e.g. *Sitticus mirandus*, *Phlegra profuga*, *Pellenes pulcher*, etc.) and northernmost limits for some

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	Siberio-Manchurian	Mongolian & Tuvan	
hypoarcto-boreal	C.alpicola S.LINEOLATUS			+C.glacialis– P.lapponicu-	D.czekanows E.flavoatra		C.koponeni	7 12%
boreal		H.camtchadalic			E.proszynski H.baicalensis P.ignifrons			4 7%
boreo-nemoral		A.festivus D.rudis E.arcuata H.dubius S.cingulatus S.floricola T.aequipes	D.hastatus E.falcata E.mikhailovi H.auratus ?P.fuscipes E.erratica	B.aemulus E.proszynsk- N.reticulatu-	+B.stepposus D.fusconotatu P.gobiensis +P.limbatus +P.sibiricus S.albolineatu +S.mirandu--			23 38%
nemoral & steppe		H.lineiventris H.patagiatus P.chrysops S.distinguendu S.penicillatus S.hilarulus S.venator	-C.nigritus M.radiata N.rayi .saltator		+S.ramitus- ++B.inexplorat	H.latens Y.coreanus	A.ontchalaan D.tuvensis P.pulcher P.profuga S.tannuolana Talavera sp.2 Talavera sp.3 T.arat T.insolitus Y.kulczynski Y.mongolicu Y.tuvinicus	27 44%
	2 (3%)	15 (25%)	10 (17%)	5 (8%)	14 (23%)	2 (3%)	13 (22%)	61

Gobian elements (e.g. *Asianellus ontchalaan*, *Yllenus kulczynskii*). At the same time, Siberio-Manchurian species, viz. "*Harmochirus" latens* and *Yllenus coreanus*, find in Tuva the westernmost limits of their distribution. Both of the above groups are known to be restricted in North Asia to the mountains of South Siberia and, hence, do not occur in the more northern faunas of Yakutia, the Magadan Area or Central Siberia. As well, almost all of the Euro-Siberian species (ca. 20% of species in Tuva) are restricted in their latitudinal distribution in Siberia to the so-called Southern Siberian faunal "corridor" (see Gorodkov, 1984) and are distributed eastwards to the Sayany Mts and Cisbaikalia. Thus, these *species occur* in Tuva (*e.g. Evarcha michailovi*, *Neon rayi*, *Evarcha falcata*, etc.) but are absent from northern/eastern territories of Siberia. In addition, the percentage of apparent Tuvan and Tuvan-Mongolian endemics is rather high (not less than 22%).The above groups of salticids together account for 40-45% of the total salticid fauna of Tuva, the highest value of all the spider families, and they add to the specialized nature and richness of the whole spider fauna.

Regarding the distributional patterns of the Tuvan salticids, there are only two species displaying a circum-Holarctic distribution, the lowest value of any of the Tuvan spider families, while most of the species are restricted to either Siberia, or South Siberia (see above). The vast majority of salticid species (82%) are either boreo-nemoral, or

nemoral/steppic, i.e. they are species of the temperate belt of Eurasia. Among them, widespread (i.e. Holarctic, trans-Palaearctic, Euro-Siberian, Siberian, etc.) species predominate, accounting for not less than 70-75%. About 23-25% of these species (e.g. *Euophrys proszynskii*, *Pellenes sibiricus*, etc.) are clearly restricted to Siberia and can be treated as Siberian (Anagaran) (sub)endemics (for more details see Logunov, 1997). Thus, it is safe to assume that any similarity of the salticid fauna of Tuva with other Siberian faunas is mostly or only due to the widespread Holarctic, trans-Palaearctic and Siberian species, both constituting about a half of every Siberian salticid fauna, while the speciality and high diversity of the Tuvan salticids is due to those species restricted to South Siberia.

Theridiidae

While Tuva has the richest theridiid fauna within Siberia (including Mongolia), the number of species is notably smaller than in more northern fauna of Finland, and only about a half that in Czechia.

Unlike the salticids, the theridiids have a very high percentage of Holarctic species. Almost half of the species have circum-Holarctic ranges and two have wide Siberio-American distributions. Value of Siberian species is rather low, while Mongolo-Tuvan endemics are well represented in Tuva.

As with the orb-weaving spiders, the majority of ranges lie in the boreo-nemoral zone.

The species composition of the Tuvan fauna is most similar to those of Yakutia, Mongolia and the Magadan Area. At the same time, the percentage of species in common with Altai is notably smaller than with Mongolia and widely separated Yakutia. This pattern is shared with the Gnaphosidae.

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	Mongolian & Tuvan	
polyzonal	A.tepidarioru S.albomaculata T.impressum-						3 7%
hy-poarcto-boreal				T.oleatus			1 3%
bo-real	T.aurantium	T.bellissimum	T.palmgreni		R.kastoni		4 11%)

	Holarctic	Trans-Palearctic	Euro-Mongolian	Siberio-American	Siberian	Mongolian & Tuvan	

boreo-nemoral	C.sticta E.caricis E,saukea N.bimaculata- R.lividus– S.bipunctata- T.montanum T.ohlerti T.petraeum T.pictum T.varians-	E.serratosignata S.phalerata		A.nordica-	T.sibiricum		15 43%
nemoral & steppe	D.prona	A.riparia R.ungulatus				Dipoena 1 Dipoena 2 E.gramineu Enop.sp E.levii S.cf.triangulo T.?karamaye Th.sp.1 Th.sp.2	12 34%
	16 (46%)	5 (14%)	1 (3%)	2 (6%)	2 (6%)	9 (26%)	35

Thomisidae

Thomisidae is the fifth largest family in Tuva. The Tuvan fauna, together with that of Mongolia, is the richest in Holarctic. The percentage of species with different distributional

	Holarctic	Trans-Palearctic	Euro-Mongo-lian	Siberio-American	Siberian	Siberio-Manchurian	Mongo-lian & Tuvan	
polyzonal	M.vatia				+X.baltistan			2 (5%)
hy-poarcto-boreal	O.arctica– X.obscurus	--O.orientalis	X.bonneti	X.britcheri X.rugosus--	X.austrosibi-			7 18%
boreal				O.sincera	X.sibiricus			2 (5%)
boreo-nemoral	O.atomaria O.trux– X.luctuosus	C.depressa X.audax X.bifasciatus-	O.rauda O.scabricula X.lineatus	X.emertoni		H.melloteei +L.maius P.undulatus T.rimosus +X.dzungaric +X.ephippiatu X.vachoni-		17 43%
Nemoral & steppe		S.globosum T.albus	X.striatipes		X.nenilini-	O.iaequalis +O.pseudoblit X.hedini X.seserlig	X.laticeps X.mugur- X.sharlaa X.sjostedti	12 30%
	6 (15%)	6 (15%)	5 (13%)	4 (10%)	4 (10%)	11 (28%)	4 (10%)	

patterns is about the same, ranging from 10 to 15%, with the exception of Siberio- or Mongolo-Manchurian species. No other family has such a high value for these species.

One East Palaearctic species, *Xysticus baltistanus*, has remarkably wide zonal distribution ranging from Kashmir (ca 35ºN) to Kolyma River mouth (ca 69ºN).

The species composition Tuvan fauna is most similar to that of Altai and to Magadan Area. The genus *Xysticus sensu lato* has the highest species diversity for its latitude (23), and seems to have highest species-group diversity in Holarctic. Similarity of Tuvan fauna to some Asian and Finnish faunas (the total fauna and species-rich families).

Distribution of spiders within Tuva

To analyse the pattern of distribution of spiders within Tuva, the whole area was divided into 8 parts, as shown in Fig. 1.1. This division does not follow any published data and is based on combination of similarity of major landscapes and on geographical position. Three areas (1, 6, 8) are exclusively mountainous, covered by taiga, mountain tundra and meadow vegetation. Area # 2, with 3 localites only, is exclusively covered with taiga. Three areas (3, 5 and 7) represent chiefly plains with a predominance of xeric types of landscape, while area # 3 has all the landscape types except for mountain tundra. Area # 4 includes all types of landscapes, and has the highest mountains in the region. These divisions allow the comparison of similar types of areas lying at the same and different latitudes.

The number of species found in each area varies from 75 (#4) to 274 (#3) (Table 3). The number of species found correlates positively with the number of localities studied and the time spent by collectors in each area, with exception of the area 8. As many as 223 species (more than 1/3 of the whole fauna) were found in one area only. Number of unique species per area varies in absolute numbers from 12 (areas # 6 and 7) to 47 (#1). Percentage of "endemic" species per area range from 5% (area # 6) to 25% (#1). The highest value of unique species in area #1 is easily explained by the fact that southern limit of distribution almost of all 47 species found in this area, coincides with Sayany mountains. Low level of unique species in area 6 can be explainable by lack of geographical barriers between neighbouring areas (# 3, 5, 7, 8).

Table 3. Number of species, unique species and percentage of unique species in 8 Tuvan subregions

Area #	1	2	3	4	5	6	7	8	1-8
Number of species	181	139	274	75	140	226	251	253	620
Number of unique species	47	23	40	13	12	12	42	34	223
% of unique species	25	17	15	17	9	5	17	13	36

One of the most interesting areas, in respect of biogeography, is the westernmost part of Tuva (area #4). The number of species reported from there is lowest, and respectively the number of "endemics" is small too. Nevertheless, the patterns of distribution and relationships of these species are unique. Four species have west Mongolian ranges: *Drassodes kaszabi, Oedothorax mongolensis, Acantholycosa triangulata* and *Xysticus mugur*. Four species, *Clubiona pseudosaxatilis, Echemus sibiricus, Parasyrisca asiatica,* and *P. logunovi*, were not found outside of Mongun-Taiga District. But the most peculiar feature of this area is the presence of species with arcto-alpine ranges and/or species closely related to arctic ones. As well as Tuva, *Erigone remota* is known, from the Alps and the

northern part of West Siberia. *Hilaira glacialis* occurs exclusively in tundra zone, except for SW Tuva. This species was not found even in mountain tundras within the boreal zone of Verkhoyanski Mt. range. An undescribed species, *Gnaphosa cf. orites*, is very close to *G. orites* which occurs only in the Hypoarctic zone and has not been found south of 60ºN. Another undescribed species known from Mongun-Taiga District, not listed in our work, "*Lepthyphantes" cf. sobrius* has similar relationships. Its sibling species *"L." sobrius* (Thorell, 1872) is found only in the tundra zone. Further investigations in this area may reveal more species with relationships to Arctic species.

Similarity between areas is shown on Table 4. The highest similarity (72%) is observed between areas # 3 & 7 and most low percentage of common sopecies is between most widely separated areas # 2 & 4.

149 species have been found in two areas studied. In all cases the number of species in common is greater between similar type of areas (3, 5 and 7, or 1, 4, 6 and 8) (Table 5).

82 species were found in three areas, 66 in 4 areas, 47 in 5. Only one species, *Steatoda albomaculata* was reported from all 8 subdivisions of Tuva. Number of species found in almost all (7 of 8) subdivisions is 13: *Aculepeira packardi, Dictyna arundinacea, Drassodes cupreus, Zelotes potanini, Pardosa tesquorum, Asianellus festivus, Dendryphantes fusconotatus, Tetragnatha extensa, Theridion impressum, T. sibiricum, Xysticus audax, Titanoeca asimilis* and *T. sibirica*.

Table 4. Number of species in each Tuvan subregion and similarity between subregions.

Area #	1	2	3	4	5	6	7	8
1	181	0.43	0.44	0.18	0.17	0.49	0.30	0.51
2		139	0.42	0.09	0.16	0.51	0.33	0.53
3			274	0.58	0.67	0.60	0.72	0.62
4				75	0.36	0.56	0.54	0.52
5					140	0.50	0.51	0.39
6						226	0.54	0.65
7							208	0.45
8								216

Table 5.Number of species found in two subregions

Area #	1	2	3	4	5	6	7	8
1	30	5	4	2	0	6	1	12
2		31	7	0	1	3	4	11
3			49	3	4	4	19	8
4				12	0	0	4	3
5					26	2	17	2
6						38	8	15
7							58	4
8								55

6.2. Spatial distribution.

According to the list of species, altogether 614 spider species from 23 families have so far been recorded in Tuva. Total family composition (in %) of the Tuvan spider fauna is shown in Fig. 6.1, with the faunal taxonomic index (TI) being Lin-Gna-Sal. Thus, this TI corresponds well with that of the entire spider fauna of the mountains of South Siberia (see Mikhailov 1997: fig. 1), but differs from other Siberian faunas (*e.g.* W., C. and NE Siberia), having a higher percentage of jumping and gnaphosid spiders. In most of the Siberian spider faunas, the TI is Lin, Lin-Lyc or Lin-Lyc-Gna. This difference, *i.e.* including the gnaphosids and salticids in the TI in Tuva is largely due to two reasons: (1) true steppe (arid) ecosystems are practically restricted to South Siberia, and just in such arid ecosystems do the Gnaphosidae and Salticidae form a large part of the whole spider communities (Fig. 6.5); and (2) the true mountain forest landscape in Tuva (Todzha Plateau and the mountain forest belt of the Tannu-Ola Range, see Map) is practically unexplored, so the total number of forest dwellers (mostly linyphiids; see Koponen, 1996) is somewhat underestimated in comparison to other Siberian spider faunas. In general, we assume that the 614 spider species so far found in Tuva constitute no more than 75-80% of its real species number.

Despite some gaps in our knowledge of the spider communities of certain vegetation types (*e.g.* birch forest, see Table 6), we consider it possible to conduct a preliminary chorological analysis on the basis of the materials at hand.

On the basis of the similarity of the communities at the value of ca. 0.1 of the Czekanowski-Soerensen index (Ics) (the UPGMA method), the spider communities are divided into two large clusters (Fig. 6.3). Cluster A represents the spider communities of all forest, meadow and mountain tundra vegetation types, including the sedge moor. Cluster B includes the spider communities found primarily/totally in steppe vegetation types. It is interesting to note that all the spider communities of the mountain tundra (GLT) and mountain steppe (MSLT) landscapes are referred to either cluster A (the former) or cluster B

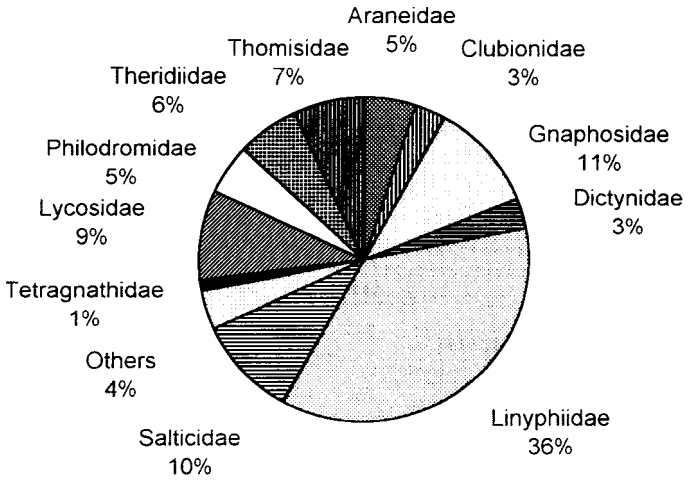


Fig. 6.1. Percentage of selected families (with 9 or more species) of the total spider fauna of Tuva (614 species).

(the latter), while those of the inundated (ILT) and mountain forest-steppe (MFLT) landscapes are distributed between the two large clusters (Fig. 6.3). Moreover, the two latter landscapes show the same taxonomic index (Lin-Gna-Lyc) and index of originality (Lin-Sal), differing in both respects from the GLT and the MSLT. Thus, it is safe to assume that the considered landscapes can be combined into two groups: primary (core) landscapes (the GLT and the MSLT) and marginal landscapes (the ILT and the MFLT). The MFLT is situated

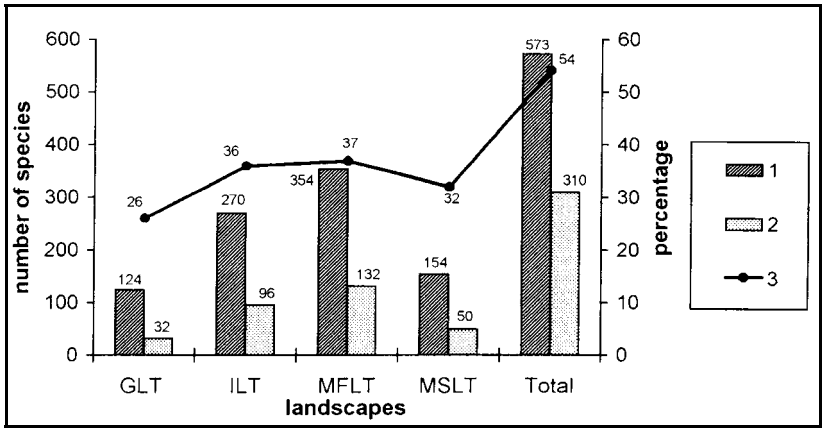


Fig. 6.2. Distribution of total species numbers (1) of exclusive (indicator) species (2) and percentage of exclusive species (3) in different landscapes of Tuva.

between primary and marginal landscapes and, for the most part, it consists of ecosystems

occurring in primary landscapes.

Table 6. Species numbers of selected spider families in the studied vegetation types of Tuva.

Family	Ladscapes and vegetation types									
	GLT				ILT					
	mwt	mst	sm	s	u	ism	mm	as	bf	rpb
Araneidae	--	--	2	2	6	7	5	2	4	2
Clubionidae	--	--	1	--	8	2	3	4	1	2
Dictynidae	--	1	1	--	4	4	2	2	--	2
Gnaphosidae	5	8	4	--	13	9	5	9	3	15
Linyphiidae	33	12	29	6	60	13	11	4	7	14
Lycosidae	12	4	6	2	16	9	10	11	7	15
Philodromidae	3	--	--	--	4	5	3	6	6	2
Salticidae	6	3	--	--	11	7	3	7	--	10
Tetragnathidae	--	--	1	1	3	1	3	5	2	1
Theridiidae	3	--	--	3	7	7	5	5	1	2
Thomisidae	7	2	2	--	5	3	3	1	2	1
Others	1	--	--	--	3	2	2	2	2	4
Total	70	30	46	14	140	69	55	58	35	70

Family	Ladscapes and vegetation types												
	MFLT								MSLT				
	sss	sms	lf	mf	bef	sm	sgg	s	dns	dbs	sds	cxs	s
Araneidae	8	7	5	6	--	3	6	1	6	8	6	1	5
Clubionidae	1	2	3	3	2	3	3	--	1	--	3	--	--
Dictynidae	2	2	2	7	--	2	1	6	4	3	2	2	1
Gnaphosidae	23	21	4	7	--	2	1	6	18	18	6	9	11
Linyphiidae	4	15	43	88	2	5	9	7	7	4	--	3	4
Lycosidae	10	14	8	13	2	10	8	4	6	11	6	3	7
Philodromidae	6	4	3	1	--	2	8	3	6	7	1	2	2
Salticidae	8	10	2	10	--	3	7	5	11	11	8	4	7
Tetragnathidae	--	2	1	3	--	3	3	--	--	2	1	--	--
Theridiidae	10	9	6	11	1	3	2	7	7	8	2	4	9
Thomisidae	8	9	4	11	--	--	5	--	6	7	3	3	1
Others	5	3	4	5	--	1	4	1	6	5	1	2	6
Total	85	98	85	165	7	37	59	35	78	84	39	33	53

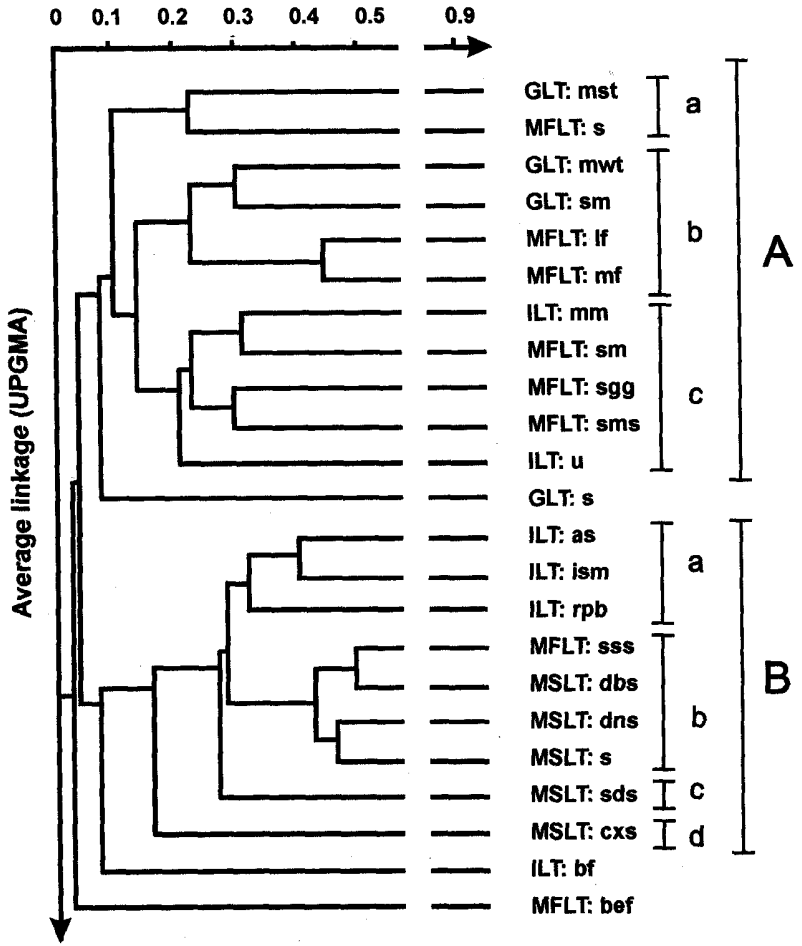


Fig. 6.3. Cluster dendrogram of the spider communities (537 species0 in 23 vegetation types based on Czekanowski-Soerensen similarity index. For abbreviations, see “List of habitats studied”

Table 7. Exclusive (indicator) species in different vegetation types of Tuva. For abbreviations, see "List of habitats studied"; figures in parentheses after family names refer to the number of exclusive species and to their proportion (%) of all exclusive species in this vegetation type; the index of originality is in square brackets.

GLT

mwt LINYPHIIDAE (3; 38%): *Agyneta affinisoides, A. fuscipalpus, Panamomops dybowskii*; THOMISIDAE (1; 13%): *Ozyptila arctica*; SALTICIDAE (4; 50%): *Chalcoscirtus sp. 1, Dendryphantes chekanowskii, Pellenes lapponicus, Sitticus lineolatus* — [Sal].

mst GNAPHOSIDAE (2; 22 %): *Gnaphosa* sp. 1; *Parasyrisca logunovi*: LYCOSIDAE (2; 22 %): *Acantholycosa triangulata, Pardosa baraan*; LINYPHIIDAE (9, 56%): *Erigone remota, Hilaira glacialis, Monocerellus montanus, Poeciloneta petrophila, Walckenaeria koenboutjei* — [Lin].

sm LYCOSIDAE (1;13%): *Xerolycosa nemoralis; LINYPHIIDAE (6; 74%): Anguliphantes cerinus, Araeoncus vorkutensis, Drepanotylus borealis, Leptorhoptrum robustum, Oreonetides sajanensis, Thyreostenius biovatus*; THOMISlDAE (1; 13%): *Ozyptila rauda* - [Lin].

s THERIDIIDAE: *Theridion* sp. 2.

ILT

u ARANEIDAE (2; 6%): *Araniella proxima, A. yaginumai*; THERIDIIDAE (2; 6%): *Achaearanea tepidariorum, Euryopis levii*; PISAURIDAE (1; 3%): *Pisaura ancora;* CLUBIONIDAE (3; 9%): *Clubiona lutescens, C. pseudosaxatilis, C. subsultans*; GNAPHOSIDAE (3; 9%): *Drassyllus pusillus, Micaria aenea, Zeiotes barkol*; LINYPHIIDAE (15; 46%): *Abacoproeces saltuum, Bathyphantes setiger, Collinsia submissa, Dactylopisthes video, Diplocephalus marusiki, Hilaira sp. 1, Kaestneria pullata, Lepthy-phantes taswnowskii, Poeciloneta variegata, Praestigia kulczynskii, Savygnia centrasiatica, Stemonyphantes sibiricus, Trematocephalus cristatus, Walckenaeria auranticeps, W. kazakhstanica*; PHILODROMIDAE (1; 3%): *Philodromus* sp. 3; SALTICIDAE (5; 15%): *Heliophanus dublus, Neon rayi, N. reticulatus, Salticus cingulatus, Sitticus mirandus*; ZORIDAE (1; 3%): *Zora* sp. 1 - [Lin-Sal].

ism LYCOSIDAE (1; 11%): *Alopecosa subrufa*; LINYPHIIDAE (6; 67%): *Araeoncus crassiceps, Dactylopisthes video, Erigone dentipalpis, Lepthyphantes kaszabi, Microlinyphia impigra, Pelecopsis minor*; THOMISIDAE (1; 11%): *Xysticus hedini*; SALTICIDAE (1; 11%): *Tuvaphantes arat*. - [Lin].

mm DICTYNIDAE (1; 17%): *Dictyna major*; LINYPHIIDAE (4; 66%): *Allomengea scopigera, A. dentisetis, Bolyphantes alticeps, Floronia bucculenta;* PHILODROMIDAE (1; 17%): *Philodromus* sp. 1 -[Lin]

as TETRAGNATHIDAE (1; 14%): *Tetragnatha obtusa*; DICTYNIDAE (1; 14%): *Argenna* sp. 1; GNAPHOSIDAE (1; 14%): *Micaria* sp. 1; LYCOSIDAE (1; 14%): *Allohogna singoriensis*; LINYPHIIDAE (1; 14*%): Epigytholus tuvensis;* SALTICIDAE

(2; 29%): *Bianor inexploratus, Harmochirus latens*.

bf ARGYRONETIDAE(1; 17%): *Argyroneta aquatica*; CLUBIONIDAE (1; 17%): *Clubiona phragmitis*; LINYPHIIDAE (2; 33%): *Lepthyphantes sp.l, Walckenaerianus aimakensis*; PHILODROMIDAE (2; 33%): *Philodromus praedatus, Thanatus striatus* — [Lin-Phi].

rpb ARANEIDAE (1; 8%): *Singa nitidula*; TITANOECIDAE (1; 8 %): *Titanoeca* sp. 1; GNAPHOSIDAE (2; 17%): *Gnaphosa chola*, *Poecilochroa variana*; LYCOSIDAE (2; 17 *%): Alopecosa* sp. 3, *Pirata hygrophilus*; LINYPHIIDAE (3; 25 *%): Collinsia caliginosa, C. dentata, Sibirocyba incerta*; SALTICIDAE (3; 25%): *Heliophanus patagiatus, Sitticus albolineatus, S. penicillatus* — [Lin-Sal].

MFLT

sss AGELENIDAE (1; 20%): *Coelote*s sp. 1; GNAPHOSIDAE (3; 60%): *Drassodes pseudolesserti, Parasyrisca belengish, Zeiotes puritanus;* LINYPHIIDAE (1; 20%): *Trichoncus vasconicus*— [Gna].

sms THERIDIIDAE (1; 13 %): *Crustulina sticta*; GNAPHOSIDAE (1; 13%): *Micaria guttulata*; LYCOSIDAE (1; 13%): *Alopecosa sibirica*; LINYPHIIDAE (2; 25%): *Hilaira gibbosa, Panamomops depilis*; THOMISIDAE (2; 25%): *Ozyptila scabricula*, *Synaema globosum*; SALTICIDAE (1; 13%): *Tuvaphantes insolitus*— [Lin-Tho].

if CLUBIONIDAE (1; 8%): *Clubiona stagnatilis*; HAHNIIDAE (1; 8%): *Cryphoeca silvicola*; GNAPHOSIDAE (1; 8%): *Gnaphosa microps*; LYCOSIDAE (1; 8%): *Alopecosa albostriata;* LINYPHIIDAE (7; 58%): *Incestophantes ancus, Lasiargus pilipes, Lepthyphantes expunctus, L. laricetorum. Maro saaristoi, Perlongipalpus sp. 1, Walckenaeria antica*; THOMISIDAE (1; 8%): *Ozyptila atomaria* — [Lin].

mf ARANEIDAE (1; 2 %): *Araneus nordmanni*; THERIDIIADE (1; 2 %): *Theridion palmgreni*; DICTY-NIDAE (1; 2%): *Dictyna alaskae*; AGELENIDAE (1; 2%): *Coelotes* sp. 2; LIOCRANIDAE (1; 2%):*Agroeca maculata*; LYCOSIDAE (1; 2%): *Alopecosa pinetorum*; LINYPHIIDAE (33; 65%): *Agyneta beata, A. conigera, Anguliphantes dybowskii, A. karpinskii, Ceratinella brevis, Collinsia distincta, Cnephalocotes obscurus, Dicymbium facetum, Diplocentria bidentata, Erigone hypoarctica, Estrandia gran-daeva, Gonatiwn rubellum, Hilaira frigida intercepta, Holminaria prolata, Lepthyphantes abiskoensis, L. pseudoobscurus, L. quadrimaculatus, Lophomma cognatum, Maro sibiricus, Notioscopus jamalensis, Oryphantes geminus, Paraeboria jeniseica, Pelecopsis palmgreni, Perregrinus deformis, Pityohyphantes phrygianus, Poeciloneta theridiformis, Porrhomma pygmaeum, Satilatlas marxi, Scotinotylus alpinus, Silometopoides sphagnicola, Silometopus elegans, Thaleria orientalis, Walckenaeria capita*; THOMISIDAE (6; 12%): *Coriarachne depressa, Lysiteles maius, Ozyptila trux, Pistius undulatus, Tmarus rimosus, Xysti-cus sibiricus*; SALTICIDAE (6; 12%): *Bianor aemulus, Dendryphantes hastatus, D. rudis, Evarcha faicata, E. proszynskii, Pseudeuophrys erratica* — [Lin].

bef LYCOSIDAE (I): *Acantholycosa lignaria*

sm CLUBIONIDAE (1; 20%): *Clubiona latericia*; LYCOSIDAE (2; 40*%): Pardosa nenilini, P. sphagnicola*; LINYPHIIDAE (1; 20%): *Asiophantes sibiricus*; SALTICIDAE

(1; 20%)*: Marpissa radiata* -[Lyc-Lin].

sgg ARANEIDAE (2; 20%): *Araneus alsine*, *Cercidia pmminens*; TETRAGNATHIDAE (1; 10%): *Pachygnatha degeeri*; GNAPHOSIDAE (1; 10%): *Haplodrassus cognatus*; LYCOSIDAE (2; 20%): *Pardosa amentata*, *P. lusisi*; LINYPHIIDAE (2; 20%): *Bolyphantes index, Minicia marginella*; PHILODROMIDAE (1; 10%): *Tibellus oblongus*; SALTICIDAE (1; 10%): *Synageles venator*- [Lin-Lyc-Ara].

s THERIDIIDAE (1, 50%): *Thymoites oleatus*; PHILODROMIDAE (1, 50%): *Philodromus margaritatus*.

MSLT

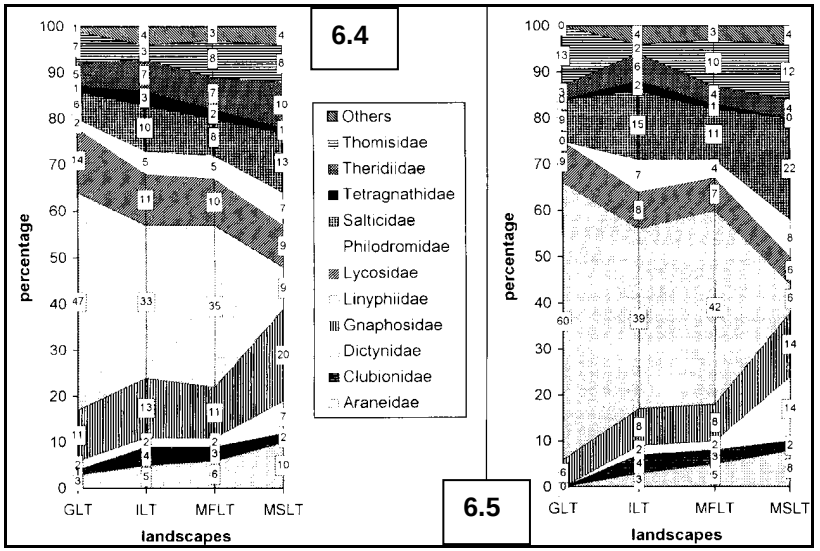
dns ARANEIDAE (1; 7%): *Araneus grossus*; DICTYNIDAE (3; 21 %): *Dictyna uvs*, *Emblyna mongolica*, E. *logunovi*; ERESIDAE(l; 7%): *Eresus cinnaberinus*; GNAPHOSIDAE (2; 14%): *Drassodes* sp. 1*, Drassyllus vinealis*; LINYPHIIDAE (1; 7%): *Agyneta levii*; PHILODROMIDAE (1; 7%): *Thanatus ubsunurensis*; THOMISIDAE (3; 21%): *Ozyptila pseudoblitea*, *Xysticus inaequalis*, *X. laticeps*; SALTICIDAE (2; 14%): *Pellenes pulcher, Phlegra profuga* - [Tho-Dic-Gna/Sal].

dbs THERIDIIDAE (1; 1%): *Achaearanea* sp. 1; DICTYNIDAE (2; 22%): *Dictyna obydovi, Devade indistincta*; LYCOSIDAE (1; 1%): *Alopecosa licenti*; LINYPHIIDAE (1; 11 %): *Incestophantes logunovi*; THOMISIDAE (2; 22%): *Xysticus seserlig, X. striatipes*; SALTICIDAE (2; 22%): *Chalcoscirtus nigrius*, *Talavera* sp. 1 - [Dic-Tho-Sal].

sds LYCOSIDAE (I): *Alopecosa* sp. 2; PHILODROMIDAE (I): *Thanatus* sp. 1; SALTICIDAE (I): *Synageles ramitus*.

cxs DICTYNIDAE (2; 22%): *Archaeodictyna consecuta*, *Arctella lapponica*; GNAPHOSIDAE (4; 44%): *Drassodes kaszabi, Echemus sibiricus, Gnaphosa tuvinica, Micaria mongunica*; LINYPHIIDAE (1; 11%): *Oedothorax mongolensis*; THOMISIDAE (1; 1%): X. mugur; SALTICIDAE (1: 11%): *Talavera aequipes* – [Gna-Dic].

s ARANEIDAE (1): *Araneus mongolicus*; THERIDIIDAE (1): *Dipoena* sp. 2: SALTICIDAE (1): *Sitticus saltator*.



Figs. 6.4-5. Proportion of selected families as percentage of species number (4) and percentages of exclusive (indicator species) within families (5) in different landscapes of Tuva. For abbreviations, see "List of habitats studied"

It is known that one of the most striking peculiarities of marginal landscapes is their higher level of biodiversity in comparison to primary landscapes (Chernov, 1975, Mordkovitch, pers. comm.). Figure 6.2 seems to support this idea as well: both the ILT and the MFLT show twice as high species numbers as the GLT and the MSLT. The taxonomic originality of spider communities in all landscapes is approximately the same, varying from 26 % (in the GLT) to 37 % (in the MFLT); and this suggests that the mixed nature of marginal landscapes does not mean that they lose their taxonomic originality and hence their independent consideration in the discussion below. It is also important to note that although the taxonomic patterns of the GLT and the MSLT are quite different (see Fig. 6.4), the number of found species and the percentage of exclusive species are practically the same, 124 (26 %) and 154 (32 %) respectively. The MSLT turned out to be the best studied Tuvan ecosystem from the arachnological point of view and, thus, the number of spider species found there is quite reliable.

Both large clusters (A and B) presented in Fig. 6.3 can be further classified into smaller ones at the Ics value of ca. 0.2-0.3. Brief characteristics of them are given below in discussing the spider communities of the landscapes considered.

The goltsy (mountain tundra) landscape, GLT (Figs. 6:2, 4, 5, 6; Table 6, 7).

This is an easily delimited but rather poorly studied landscape and hence all figures discussed below are very preliminary. Altogether 124 spider species have been encountered, of which 32 (or 26 %) can be considered exclusive species (Fig. 6.2). Almost a half of the entire GLT fauna is represented by the Linyphiidae (47 %, Fig. 6.4), but the proportions of the Lycosidae (14 %) and Gnaphosidae (11 %) are also marked. The GLT taxonomic index is Lin-Lyc (can even be treated as Lin). Actually, the GLT originality is pro-

vided only by six spider families (of 23 recorded in Tuva), of which the most species-rich is Linyphiidae (60 %, Fig. 6.5) and hence the index of originality is Lin. However, distribution of the latter index over GLT vegetation types shows clear differences between the moss-tussock-shrubby wet tundra (mwt) on the one hand and other formations on the other (Table 7). Most probably, this is due to insufficient collecting in all the GLT vegetation types and poor/wrong differentiation between the mst and the mwt. Therefore, we assume that the separation of the mst and the mwt shown in Fig. 6.3 (clusters Aa and Ab), as well as the differences in the index of originality (Table 7), must now be treated as an artifact and a matter for further more detailed studies. The dendrogram (Fig. 6.3) could easily be explained if both Aa and Ab clusters are combined.

The proportion of exclusive species turned out to be highest in the moss-lichen-stony tundra (mst). However, such disproportion also seems to be due to insufficient collecting. For instance, only 14 spider species have been collected in mountain scree (Fig. 6.6: s), while the similar biotope of the MFLT is already represented by 35 species (Fig. 6.8). So, insufficient collecting in the screes of mountain tundra, to our mind, is one reason why the spider community of this biome is outside any cluster (Fig. 6.3), while its real position seems to be in cluster Aa.

The inundated landscape, ILT (Figs. 6:2, 4, 5, 7; Table 1, 2).

This unique landscape consists of a set of unrelated vegetation types differing both physiognomically and in species composition (both plants and animals). The number of spider species found is 270, of which 96 (36 %) are exclusive (Fig. 6.2); the taxonomic pattern is shown in Fig. 6.4, with the taxonomic index, like in most Siberian faunas, Lin-Gna-Lyc and the index of originality Lin-Sal (Fig. 6.5). The taxonomic originality over the ILT vegetation types is shown in Table 7. Practically everywhere linyphiids form the bulk of exclusive species, with the exception of the urema and especially the river pebble banks where the salticids number 15 and 25 percent of exclusive species, respectively.

Among the treated vegetation types of the ILT (Fig. 6.7; Table 6), the urema is characterized by the highest level of both species diversity (140) and taxonomic originality (24 %). In almost all vegetation types, except the river pebble banks where the gnaphosids and lycosids are more numerous, the Linyphiidae noticeably predominate. It is important to note that although the urema is a forest vegetation type, its spider community is situated in the dendrogram close to meadow and swampy formations (Fig. 6.3: cluster Ac), but not close to other forests involved (cluster Ab). Thus, being physiognomically a forest, the urema can be considered a "meadow" from the arachnological point of view. This observation agrees well with the botanical data provided by Kuminova *et al*. (1985), showing poor floristic linkages of the urema with Tuvan forests.

The spider community of the bulrush fen (35 species) is not included in any cluster (Fig. 6.3) despite a low percentage of originality (Fig. 6.7: 17 %). This could mean that its spider community is formed by an occasional set of species.

The spider communities of three vegetation types of the ILT (as, ism and rpb) represent a well marked separate cluster (Fig. 6.3: Ba) of inundated (semi)arid ecosystems. Practically all of them show no differences in the level of species diversity, the taxonomic pattern (Fig. 6.7; Table 6) and the index of originality (Table 7).

The rest of the ILT vegetation types (mm) is linked with the meadow formations of the mountain forest-steppe landscape (Fig. 6.3: Ac); for other details see below.

The mountain forest-steppe landscape, MFLT (Figs. 6:2, 4, 5, 8; Table 6, 7).

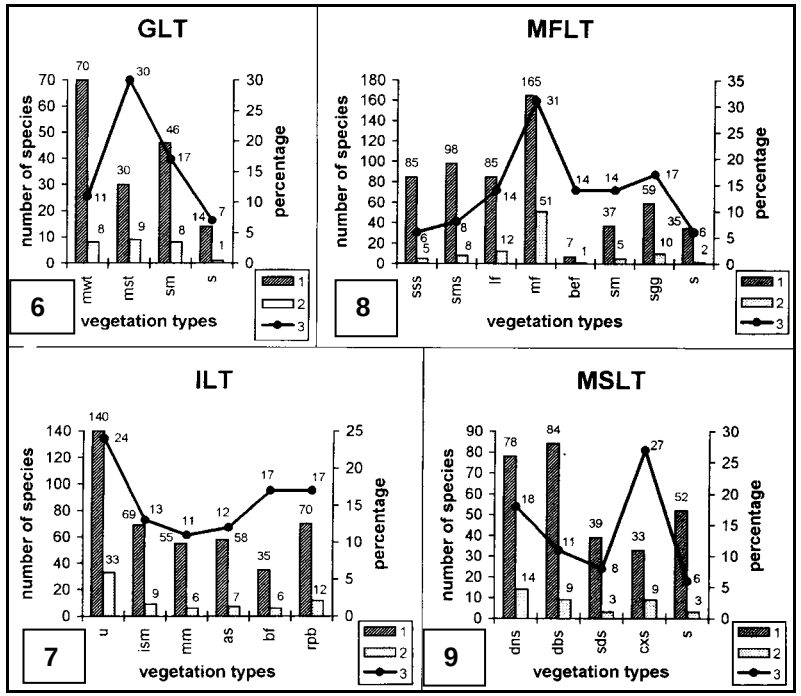
This is the best-represented and most complicated landscape often called "exposure forest-steppe" (Lavrenko *et al*., 1991), pointing to the dependence of both steppe (S-slopes) and forest (N-slopes) ecosystems upon their slope exposition (*i.e*. the so-called exposure differentiating of landscape). Analogues of this landscape can be found only in Mongolia and in S. Siberian regions neighbouring Tuva. Altogether 354 spider species have been found in the MFLT, of which 132 (or 37 %) are treated as exclusive (Fig. 6.2). The MFLT taxonomic index is Lin-Gna-Lyc (Fig. 6.4), the index of originality is Lin-Sal (Fig. 6.5), both indices being the same as in the ILT and in most Siberian spider faunas (see Mikhailov 1997: fig. 1). The taxonomic originality over the MFLT vegetation types is shown in Table 7.

Among the MFLT vegetation types, the Linyphiidae predominate in the forest formations (44 % of all forest spider species), while the Gnaphosidae and the Lycosidae predominate in the steppe-like ones (see Table 6). However, the spider community of the sloping shrub-stony steppes (sss) is the only one combined with those of the mountain steppe formations (Fig. 6.3: cluster Bb), while the sloping meadow shrubby steppe (sms) is found among other meadow formations (Fig. 6.3: cluster Ac). This can be easily explained by considering the taxonomic indices of both the sss and the sms, Gna-Lyc-The and Gna-Lin-Lyc, respectively. Thus, in spite of the dominating gnaphosids in both vegetation types, occurrence of the linyphiids is more important in linking the sms together with other meadow formations. Furthermore, the indices of originality in these formations are quite different as well; Gna in the sss and Lin-Tho in the sms (Table 7). So, while occurring in physiognomically similar vegetation types (sss and sms), these two spider communities have nothing in common when analyzed in detail.

The spider community of the taiga forest (Fig. 6.8: mf) turned out to be the richest, 165 species with 31 % of them being exclusive. At the same time, the spiders of the birch forest (Fig. 6.8: bef; Table 6) have remained practically unstudied, 7 recorded species constitute, in our view, no more that 5-7 % of the expected fauna. This is why the spider community of the birch forest is outside any of the large clusters shown in Fig. 6.3. It is also important to note that 73 exclusive species, or 55 % of all exclusive species, recorded from the MFLT, are those of the forest formations, most of them being naturally linyphiids. Contrary to forest spiders, the spider communities of sloping steppes (sss, sms) and meadow glades (sgg) show a rather low percentage of exclusive species (Fig. 6.8), probably due to the fact that most of these species also occur either in the steppe formations of the MSLT or the meadow formations, including the urema (see above). Such differences between the number of exclusive species of forest and steppe formations could be partially explained by the lack of reliable arachnological data from the true mountain forest landscape (*sensu* Kuminova *et al*., 1985). As noted above, this landscape has remained unstudied, and a part of its species is in fact included in the taiga forest community (Table 6: mf). Thus, in reality, some/most exclusive species of the mf are common for the MFLT and mountain forest landscapes and the actual level of originality must be lower than that shown in Fig. 6.8: mf.

The spider communities of all the meadow and swampy formations of the MFLT, as well as those of the urema and the inundated mesophytic meadows, are combined into a single cluster (Fig. 6.3: Ac). These are all similar: a clear dominant group with regard to species diversity is lacking (but everywhere linyphiids are rather numerous) and values of originality are low (8-14 %, see Figs. 6.7, 6.8). Both the taxonomic index and the index of originality over these spider communities show no consistency (Tables 6, 7), *e.g*. the latter

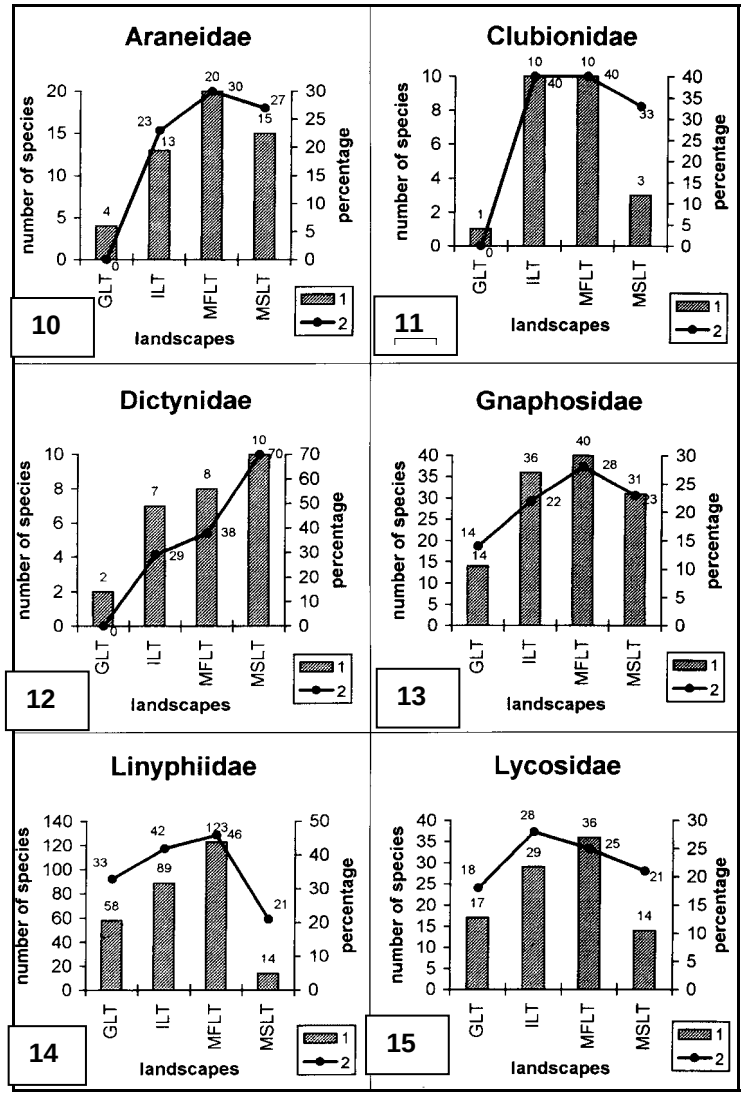
index of the sms is Lin-Tho but that of the sgg is Lin-Lyc-Ara, *etc*. Thus, most of the spider communities combined into cluster Ac (Fig. 6.3) show mixed composition and their closeness to each other is largely explained by the occurrence of eurytopic species.



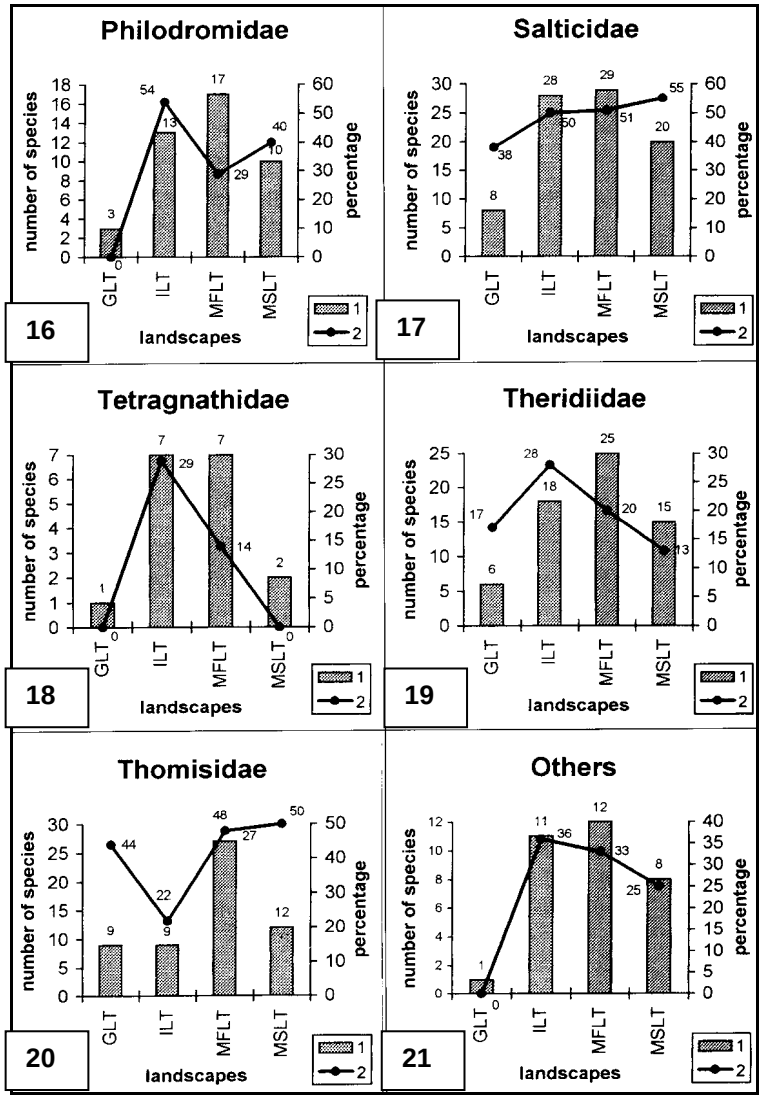
Figs. 6.6-9. Distribution of species numbers (1), numbers of exclusive (indicator species (2) and percentage of exclusive species (3) in different vegetation types of four Tuvan landscapes studied. For abbreviations, see "List of habitats studied"

The mountain steppe landscape, MSLT (Figs. 6:2, 4, 5, 9; Table 6, 7).

This is the most peculiar landscape in Tuva (and in all S. Siberia), as a number of Turanian and North Turanian-Dzhungarian biotic elements are shown (Lavrenko *et al*., 1991; Emelianov, 1972) to occur there; this points to the old (floro)faunogenetic connections between the semiarid regions of S. Siberia and those of the Ancient Mediterranean. Therefore, both the taxonomic pattern and the index of originality of the MSLT are found to be



Figs. 6.10-15. Distribution of species numbers (1) and percentage of exclusive (indicator) species (2) of six spider families in different landscapes of Tuva. For abbreviations, see "List of habitats studied"



Figs 6.16-21. Distribution of species numbers (1) and percentage of exclusive (indicator) species (2) of 18 spider families in different landscapes of Tuva.

close to those of Middle Asian spider faunas (*cf.* Mikhailov, 1997: fig. 1). This is well seen in the composition of indices of originality over the MSLT vegetation types as shown in Table 7, with the Gnaphosidae, Dictynidae and Salticidae predominating.

The MSLT taxonomic index is Gna-Sal-The-Ara (Fig. 6.4) and the index of originality is Sal-Gna-Dic (Fig. 6.5), *i.e.* both species diversity and taxonomic originality are mostly formed by two families: Gnaphosidae and Salticidae. Another oddity of the MSLT is that it is the only landscape where the Dictynidae play a role in forming the index of originality (Fig. 6.5; Table 7). Both these peculiarities obviously separate the MSLT spider community from those of all other landscapes discussed above. Altogether 154 spider species have been encountered in the MSLT, of which 50 (or 32 %) are found to be exclusive species (Fig. 6.2). Most of the MSLT exclusive species (32 species, 64 %) are gathered in the dns, dbs and cxs (Fig. 6.9; Table 6).

However, the spider community of the high-mountain (=cryophyte) steppe (cxs) differs from the others in all taxonomic parameters. Firstly, its taxonomic pattern is of mixed nature, *i.e.* there is no clear dominant group (Table 6). Secondly, despite the lowest level of species diversity (33 species), the cxs spider community had the highest taxonomic originality (Fig. 6.9) formed by two spider groups only: gnaphosids and dictynids (66% of exclusive species, see Table 7). So, this spider community is small but quite specialized; and due to this it is placed in a separate position in the dendrogram (Fig. 6.3: Bd), outside other steppe formations of Tuva.

The separate position of the desert sandy shrub-grass steppe (sds) community in the dendrogram (Fig. 6.3: Bc) is somewhat unexpected. From general considerations, one could assume it should be near/inside cluster Bb, as the dry shrub-grass steppes (dbs) and the sds are always neighboring and, moreover, the former are transformed into the latter under special edaphic factors and when destroyed by human activity (Kuminova *et al.*, 1985). Probably the last fact is very important, and we can consider the spider community of the sds to be primarily formed by a mixed set of migrants from other steppe formations. If so, this explains the low level of diversity in this community (39 species) and the lowest value of its taxonomic originality (Fig. 6.9), as well as its separate position within the large "steppe" cluster B on the dendrogram.

The last cluster to be discussed is Bb (Fig. 6.3). It consists of true steppe formations, which show a similar level of spider diversity (Figs. 6.8, 6.9) and differ from other formations by the dominance of gnaphosids in their taxonomic indices (Table 6). At the same time, the indices of originality are quite different (Table 7), *e.g.* Gna in the sss and Dic-Tho-Sal in the dbs. This means that the strong closeness of these spider communities (the Icz ca. 0.4) seen in Fig. 6.3 is explained by the species mainly/only restricted to steppe vegetation types, *i.e.* steppe stenobionts.

The distribution of species numbers and percentages of exclusive species over the landscapes studied are shown in Figs. 6.10-21 for selected spider families with 9 or more encountered species ("Others" shows generalized data for 13 small families with 1-3 species, see the check-list above). On the basis of these diagrams, the following conclusions seem to be possible.

(1) Most of the families show their maximal diversity and percentage of exclusive species in the inundated and forest-steppe landscapes, this being in good agreement with the general picture for all the families (Fig. 6.2).

(2) In most families, maximum of originality is shown in either the ILT (Figs. 6.15-16, 6.18-19) or the MFLT (Figs. 6:10, 13, 14), with the exception of the dictynid and jumping spiders (Fig. 6:12, 17), which show a consistent increase in this percentage of originality from the GLT to the MSLT.

(3) The Thomisidae show the minimum of both species diversity and level of originality in the ILT, and this could mean that they avoid the inundated communities (at least in

Tuva).

(4) Only six families have exclusive species in the GLT, namely Gnaphosidae, Linyphiidae, Lycosidae, Salticidae, Theridiidae and Thomisidae; for their composition see Fig. 6.5.

(2) In most families, maximum of originality is shown in either the ILT (Figs. 6.15-16, 6.18-19) or the MFLT (Figs. 6:10, 13, 14), with the exception of the dictynid and jumping spiders (Fig. 6:12, 17), which show a consistent increase in this percentage of originality from the GLT to the MSLT.

(3) The Thomisidae show the minimum of both species diversity and level of originality in the ILT, and this could mean that they avoid the inundated communities (at least in Tuva).

(4) Only six families have exclusive species in the GLT, namely Gnaphosidae, Linyphiidae, Lycosidae, Salticidae, Theridiidae and Thomisidae; for their composition see Fig. 6.5.

(5) Although the Linyphiidae show the minimum of species diversity (14 species or 9%; Fig. 6:4, 14) in the MSLT, at least one species is always found to be exclusive in all vegetation types (Table 7). This could indicate that the linyphiid fauna of arid communities is mainly/only formed by very specialized species.

(6) Both the salticids and gnaphosids (Figs. 6:13, 17) are richest in the ILT and the MFLT, but not in the MSLT as might be expected. Thus, their marked contribution to arid spider communities is caused not by their increase but is due to the decrease of the species number of the linyphiids (*cf*. Fig. 6.14).

7. References

Agnarsson, I., 1996. Íslenskar könguær. – Fjölrit Náttúfræðistofnunar, Reykjavík, 175 pp.

Baert, L., 1994 *Walckenaeria koenboutjei*, a new Siberian erigonid spider (Araneae, Linyphiidae). - Bull. Inst. r. Sci. nat. Belg., Entomol., 64: 5-7.

Baev, P.V., Penev, L.D., 1991. BIODIV - a programm for calculating biological diversity parameters and cluster analysis. - 1st Evolutionary Morphol. & Ecol. Animals, Moscow.

Bélanger, G., Hutchinson, R., 1992. Liste annotée des araignées (Araneae) du Québec. - Pirata, 1: 2-119.

Benell-Aitchison, C.W., Dondale, Ch.D., 1990. A check-list of Manitoba spiders (Araneae) with notes on geographic relationships. - Naturaliste canadien, 117: 215-237.

Bosmans, R., Keer, J. van, 1999. The genus *Enoplognatha* Pavesi, 1880 in the Mediterranean region (Araneae: Theridiidae).- Bull. Br. arachnol. Soc., 11(6): 209-241.

Brignoli, P. M., 1982. On a few spiders from China (Araneae). - Bull. Br. arachnol. Soc., 5(8): 344-351.

Buchar, J., 1966. Bemerkungen zu den verwandtschaftlichen Beziehungen zwishen den mitteleuropäischen Populationen der Art *Acantholycosa norvegica* (Thorell). (Araneae: Lycosidae). - Acta Univ. Car. Biol., 1966: 1-8.

Buckle,D., Roney, K., 1995. *Araniella proxima* (Kulczynski) (Araneae: Araneidae) in North America. - Can. Ent. 127: 977-978.

Cardoso, P., 1999. Portuguese spiders checklist: http://www.geocities.com/RainForest/Vines/5197/checklist.html

Chernov, Yu.I., 1975. Nature zonation and terrestrial animal life. - "Mysl" Press, Moscow, 222 pp. [In Russian]

Chikuni, Y., 1989. Pictorial encyclopedia of spiders in Japan. - Kaisei-sha Press, Tokyo, 310 pp. [In Japanese]

Chamberlin, R.V., Ivie, W., 1947. The spiders of Alaska. - Bull. Univ. Utah, 37(10): 1-130.

Chamberlin, R.V., Gertsch, W.J., 1958. The spider family Dictynidae in America north of Mexico. - Bull. Amer. Mus. Nat. Hist, 116: 1-152.

Check-list of spiders of the Czech Republic. - Arachnological Section of the Czech Entomological Society (Czech Republic), 1999: http://www.butbn.cas.cz/klimes/arachno/

Crawford, R., 1988. An annotated checklist of the spiders of Washington. - Burke Mus. Contrib. Anthropol. Zool., 39: 359-403.

Danilov, S.N., 1990. Spider fauna of the Transbaikalia. - Fauna and ecology of the arthropods of the Trans- and Cisbaikalia, Ulan-Ude: 75-92. [In Russian]

Danilov, S.N., 1991. A new species of the spider genus *Tibellus* (Aranei, Philodromidae) from Transbaikalia. - Zool. Zhurnal, 70(8): 139-141. [In Russian]

Danilov, S.N., 1993. Spiders of the genus *Micaria* Westring (Araneae, Gnaphosidae) from Siberia. - Ann. Naturhist. Mus. Wien., 94/95B: 427-431.

Danilov, S.N., 1994 Cribellate spiders (Aranei, Cribellatae) from Transbaikalia. - Ent. Obozr., 73(1): 200-209. [In Russian]

Danilov, S.N., 1996(1997). New data on the spider genus *Micaria* Westring, 1851 in Asia

(Aranei Gnaphosidae). - Arthropoda Sel., 5(3/4): 113-116.
Danilov, S.N., 1997. New data on the jumping spiders from South Siberia (Aranei Salticidae). – Arthropoda Sel., 6(1/2): 113-116.
Danilov, S.N., 1998(1999). The spider family Liocranidae in Siberia and Far East (Aranei). - Arthropoda Sel., 7(4): 313-317.
Danilov, S.N., Logunov, D.V., 1993. Faunistic review of the jumping spiders of Transbaikalia (Aranei, Salticidae). - Arthropoda Sel., 2(4): 25-39.
Dondale, C.D., Redner, J.H., 1975. The genus *Ozyptila* in North America (Araneida, Thomisidae).- J. Arachnol., 2: 129-181.
Dondale, C.D., Redner, J.H.,, 1982. The insects and arachnids of Canada. part 9. the sac spiders of Canada and Alaska. Araneae: Clubionidae and Anyphaenidae. - Research Branch Agriculture Canada Publ., 1724: 1-194.
Dondale, C.D., Redner, J.H., 1990. The insects and arachnids of Canada. Part 17. The wolf spiders, nurseryweb spiders, and lynx spiders of Canada and Alaska (Araneae: Lycosidae, Pisauridae, and Oxyopidae). Agric. Can. Publ., 1856: 1-383.
Dondale, C.D., Redner, J.H., Marusik, Yu.M., 1997. Spiders (Araneae) of the Yukon. - Insects of the Yukon (ed. Danks, H.V.), Ottawa: 73-113.
Efimik, V.E., 1999. A review of the spider genus *Tibellus* Simon, 1875 of the East Palaearctic (Aranei, Philodromidae). - Arthropoda Sel., 8(2): 103-124.
Efimik, V.E., Esyunin, S.L., 1996. A new subgenus and new species of *Walckenaeria* Blackwall, 1883, from the Urals with remarks on the distribution of some *unicornis*-group species in the Palaearctic (Aranei Linyphiidae). - Arthropoda Sel., 5(1-2): 63-73.
Emelianov A. F., 1972. A review of views on the history forming of the biota of Central Asian deserts. - Insects of Mongolia: 11-49 [In Russian]
Eskov, K.Y., 1979.Three new species of spiders of the family Linyphiidae from Siberia (Aranei). - Fauna and Ecology of Arachnids, Proc. Zool. Inst. USSR Acad. Sci., 85: 65-72. [In Russian]
Eskov, K.Y., 1980a. Two new species of spiders from the genus *Maro* (Aranei, Linyphiidae) from Siberia. - Zool. Zhurnal, 59(7): 1100- 1103. [In Russian]
Eskov, K.Y.,1980b. Taxonomic notes on spiders of the genus *Hummelia* (Aranei, Linyphiidae) with a description of a new species. - Zool. Zhurnal, 59(11): 1743-1746.
Eskov, K.Y.,1981a. Spiders of the genera *Eboria, Latithorax, Rhaebothorax* and *Typhochrestus* (Aranei, Linyphiidae) in the fauna of Siberia. - Zool. Zhurnal, 60(4): 496-505. [In Russian]
Eskov, K.Yu., 1981b. Taxonomy of spiders of the genus *Hilaira* (Aranei, Linyphiidae). - Zool. Zhurnal, 60(10): 1486-1493. [In Russian]
Eskov, K.Yu., 1986. On *Veles* Pakhorukov 1981 and *Wubanoides* n.gen., two Siberian linyphiid genera (Arachnida: Araneae: Linyphiidae). - Senckenberg. biol., 67(1-3): 173-182.
Eskov, K.Yu., 1987a. New data on the spider genus *Hilaira* (Aranei, Linyphiidae) in the fauna of the USSR. - Zool. Zhurnal, 66(7): 1020-1031. [In Russian]
Eskov, K.Yu., 1987b. The spider genus *Robertus* O.Pickard-Cambridge in the USSR, with

an analysis of its distribution (Arachnida: Araneae: Theridiidae). - Senckenberg. biol., 67(4-6): 279-296.
Eskov, K.Yu., 1988a. Seven new monotypic spider genera of the family Linyphiidae (Aranei) from Siberia. - Zool. Zhurnal, 67(5): 678-690. [In Russian]
Eskov, K.Yu., 1988b. Spiders of the genera *Mecynargus, Mecynargoides* gen.n. and *Tubercithorax* gen.n. (Aranei, Linyphiidae) in the fauna of the USSR. - Zool. Zhurnal, 67(12): 1822-1832. [In Russian]
Eskov, K.Yu., 1988c. Spiders (Aranei) of Middle Siberia. - Materials on fauna of Middle Siberia and adjacent areas of Mongolia, Moscow: IEMEA Press: 101-155. [In Russian]
Eskov, K.Yu., 1988d. The spider genera *Savignya* Blackwall, *Diplocephalus* Bertkau and *Archaraeoncus* Tanasevitch (Aranei, Linyphiidae) in the fauna of Siberia and the Soviet Far East. - Folia Entomol. Hung., 49:13-39.
Eskov, K.Yu., 1989a. New monotypic genera of the spider family Linyphiidae (Aranei) from Siberia. Communication 1. - Zool. Zhurnal, 68(9): 68-78. [In Russian]
Eskov, K.Yu., 1989b. New Siberian species of erigonine spiders (Arachnida, Aranei, Linyphiidae). - Spixiana, 11(2): 97-109.
Eskov, K.Yu., 1990a. New monotypic genera of the spider family Linyphiidae (Aranei) from Siberia. Communication 2. - Zool. Zhurnal, 69(1): 43-53. [In Russian]
Eskov, K.Yu., 1990b. The spider genus *Collinsia* O. Pickard-Cambridge, 1913 in the fauna of Siberia and the Soviet Far East (Arachnida: Araneae: Linyphiidae). - Senckenberg. biol., 70(4-6): 287-298.
Eskov, K.Yu., 1991a. To the taxonomy and zoogeography of spiders of the genera *Maro* and *Oreonetides* (Aranei, Linyphiidae). - Zool. Zhurnal, 70(4): 45-54. [In Russian]
Eskov, K.Yu., 1991b. The spider genus *Savignya* (s. str.) (Aranei, Linyphiidae) in the faunas of the Far East and Central Asia. - Zool. Zhurnal, 70(5): 140-144. [In Russian]
Eskov, K.Yu., 1991c. New linyphiid spiders from Siberia and the Far East. 1. The genus *Holminaria* gen. nov. (Arachnida, Araneae: Linyphiidae). - Reichenbachia, 28(2): 97-102.
Eskov, K.Yu., 1992. New data on the linyphiid spider fauna of South Siberia (Aranei Linyphiidae). - Arthropoda Sel., 1(2): 73-82.
Eskov, K.Yu., 1993. Several new linyphiid spider genera (Aranei Linyphiidae) from the Russia Far East. - Arthropoda Sel., 2(3): 43-60.
Eskov, K.Yu. 1994. Catalogue of the linyphiid spiders of northern Asia (Arachnida, Araneae, Linyphiidae). Sofia-Moscow: PENSOFT Publ. 144 pp.
Eskov, K.Yu, Marusik, Yu.M., 1991. New linyphiid spiders (Aranei, Linyphiidae) from East Siberia. - Korean Arachnol., 6(2): 237-253.
Eskov, K.Yu, Marusik, Yu.M., 1992a. On the mainly Siberian spider genera *Wubanoides, Parawubanoides* gen.n. and Poeciloneta (Aranei Linyphiidae). -Arthropoda Sel., 1(1): 21-38.
Eskov, K.Yu, Marusik, Yu.M., 1992b. On the Siberio-Nearctic erigonine spider genus *Si-*

lometopoides (Araneida: Linyphiidae). - Reichenbachia, 29(19): 97-103.
Eskov, K.Yu, Marusik, Yu.M., 1992c. On *Tunagyna* and *Thaleria*, two closely related Siberio-Nearctic spider genera (Araneida: Linyphiidae). - Ent. Scand., 22(4): 405-416.
Eskov, K.Yu, Marusik, Yu.M., 1992d. The spider genus *Centromerus* (Aranei Linyphiidae) in the fauna of Siberia and the Russian Far East, with an analysis of its distribution. - Arthropoda Sel., 1(2): 33-46.
Eskov, K.Yu, Marusik, Yu.M., 1994. New data on the taxonomy and faunistics of North Asian linyphiid spiders (Aranei Linyphiidae). - Arthropoda Sel., 2(4): 41-79.
Eskov, K.Yu, Marusik, Yu.M., 1994(1995). On the spiders from Saur Mt. Range, Eastern Kazakhstan (Arachnida: Araneae). - Beitr. Araneol., 4: 55-94.
Eskov K.Yu., Marusik Yu.M., 1997. A new species of erigonine spider genus *Erigonoplus* (Araneida, Linyphidae) from south Siberia. - Arthropoda Sel., 6(1/2): 91-93.
Esynin, S.L., 1992. Remarks on the Ural spider fauna (Arachnida, Aranei) 1. New records of crab-spiders (Philodromidae, Thomisidae) and taxonomic remarks. - Zool. Zhurnal, 71(11): 33-42. [In Russian]
Esyunin, S.L., 1994. Remarks on the spider fauna of the Urals, 3. *Devade* Simon, 1884, a genus new to the Urals, with notes on *Devade indistincta* (O.P.-Cambridge, 1872) (Arachnida Aranei, Dictynidae). - Arthropoda Sel., 3(1/2): 39-47.
Esyunin, S.L., 1996. The spider (Arachnida, Aranei) fauna of Yuganskiy Reserve. - Ecosystems of the middle Priobye, "Yekaterinburg" Press, I: 67-79. [In Russian]
Esyunin, S.L., Efimik, V.E., 1996. Catalogue of the spiders (Arachnida, Aranaei) of the Urals. - KMK Scientific Press, Moscow, 229 pp.
Esyunin, S.L., Efimik, V.E., 1998a. Remarks on the spider fauna of the Urals, 8. New and unidentified species from steppe landscapes of the South Urals. - Arthropoda Sel., 7(2): 145-152.
Esyunin, S.L., Efimik, V.E., 1998b(1999). Remarks on the spider fauna of the Urals, 9. New data data on the Ural species of the genus *Lepthyphantes* Menge, 1866 (*s.l.*) (Aranei: Linyphiidae). - Arthropoda Sel., 7(3): 227-232.
Esyunin, S.L., Efimik, V.E., Mazura, N.S., 1998(1999). Remarks on the spider fauna of the Urals, 10. New records of spider species (Aranei). - Arthropoda Sel., 7(4): 319-327.
Fuhn, I.E., Niculescu-Burlacu, F., 1971. Fam. Lycosidae. - Fauna Rep. Soc. Romania (Arachnida), 5(3): 1-253.
Gajdoš, P., Svatoń, J., Sloboda, K., 1999. Catalogue of Slovakian spiders. - Slovak Academy of Sciences Press, Bratislava, 337 pp.
Gorodkov, K.B., 1984. Types of the ranges of insects inhabiting tundra and taiga zones of the European part of USSR. - Insect ranges of the European part of USSR, Maps 179-221, Leningrad: Nauka Press: 3-20. [In Russian]
Grese, N., 1909. Die Spinnen der Halbinsel Jamal. - Yezhegodnik Zool. Muz., 14: 325-331.
Grimm, U., 1985. Die Gnaphosidae Mitteleuropas (Arachnida, Araneae). - Abh. Verh. naturw. Ver. Hamburg (N.F.), 26: 1-318.
Heimer, S., 1987. Neue Spinnenarten aus der Mongolei (MVR) (Arachnida, Araneae, Theridiidae et Linyphiidae). - Reichenbachia, 24(20): 139-151.

Helsdingen, P.J., 1968. Comparative notes on the species of the Holarctic genus *Stemonyphantes* Menge (Araneida, Linyphiidae). - Zool. Meded. (Leiden), 43(10): 117-139.
Helsdingen, P.J., 1969. A reclassification of the species of *Linyphia* Latreille, based on the functioning of the genitalia (Araneida, Linyphiidae). I. - Zool. Verh. (Leiden), 105: 1-303.
Helsdingen, P.J., 1970. A reclassification of the species of *Linyphia* Latreille, based on the functioning of the genitalia (Araneida, Linyphiidae) II. - Zool. Verh. (Leiden), 111: 1-86.
Helsdingen, P.J., 1974. The affinities of *Wubana* and *Allomengea* with some notes on the latter genus (Araneae, Linyphiidae). - Zool. Meded. (Leiden), 46(22): 295-321.
Helsdingen, P.J., 1973. On the affinity of the genus *Scotargus* Simon (Araneae; Linyphiidae). - Bull. Brit. Arachnol. Soc., 2(9): 189-192.
Helsdingen, P.J., 1978. Some synonymies in Old World spiders. - Zool. Meded. (Leiden), 53(17): 185-197.
Helsdingen, P.J., Thaler, K., Deltshev, C., 1977. The *tenuis* group of *Lepthyphantes* Menge (Araneae, Linyphiidae). - Tijdschr. Entom. (Netherlands), 120(1): 1-54.
Hippa, H., Koponen, S., Oksala, I.,1986. Revision and classification of the holarctic species of the *Ozyptila rauda* group (Araneae, Thomisidae). - Ann. Zool. Fennici, 23(3): 321-328.
Hippa, H., Oksala, I., 1985. A review of some Holarctic *Agyneta* Hull *s.str*. (Araneae, Linyphiidae). - Bull. Brit. Arachnol. Soc., 6(7): 277-288.
Holm, Å., 1943. Zur Kenntnis der Taxonomie, Ökologie und Verbreitung der schwedischen Arten der Spinnengattungen *Rhaebothorax* Sim., *Typhochraestus* Sim., und *Latithorax* n. gen. - Ark. Zool., 34A, 4(19): 1-32.
Holm, Å., 1945. Zur Kenntnis der Spinnenfauna des Torneträskgebietes. - Ark. Zool, 36A(15): 1-80.
Holm, Å., 1947. Svensk spindelfauna 3. Egentliga spindlar. Araneae. Fam. 8-10 Oxyopidae, Lycosidae och Pisauridae. - Stockholm, 48 pp.+ 10 pl..
Holm, Å, 1956. Notes on the Arctic spiders of the genera *Erigone* Aud. and *Hilaira* Sim. - Ark. Zool., 9: 453-467.
Holm, Å., 1960. On a collection of spiders from Alaska. - Zool. Bidrag, Uppsala, 33: 109-134.
Holm, Å., 1967. Spiders (Araneae) from West Greenland. - Meddel. Gronland, 184(1): 1-99.
Holm, Å., 1968. A contribution to the spider fauna of Sweden. - Zool. Bidrag, Uppsala, 37: 183-209.
Holm, Å., 1970. Notes on spiders collected by the "Vega" expedition, 1878-1880. - Ent. Scand., 1: 188-208.
Holm, Å., 1973. On the spiders collected during the Swedish expeditions to Novaya Zemlya and Yenisey in 1875 and 1876. – Zool. Scripta, 2: 1-110.
Holm, Å., 1978. Spiders of the genus *Micaria* Westr. from the Torneträsk area in northern

Swedish Lapland. - Ent. Scand., 9(1): 68- 74.
Holm, Å., 1987. Some spiders (Araneae) new to Sweden. - Entomol. Tidskr., 108(4): 159-165. [In Swedish].
Holm, Å., Kronestedt, T., 1970. A taxonomic study of the wolf spiders of the *Pardosa pullata*-group (Araneae, Lycosidae). - Acta Ent. Bohemosl., 67(6): 408-428.
Hu, J.L., Wu, W.G., 1989. Spiders from agricultural regions of the Xinjiang-Uygur Autonomous Region. - Shandong Univ. Press, 435 pp. [In Chinese]
Hutchinson, R., Bélanger, G., 1992(1994). Liste annotée des araignées (Araneae) susceptibles de se trouver au Québec. - Pirata, 1(2): 202-229.
Ivie, W., 1969. North American spiders of the genus *Bathyphantes* (Araneae, Linyphiidae). - Amer. Mus. Novitates, 2364: 1-70.
Kamura, T., 1995. A newly recordered spider from Japan, *Phaeocedus braccatus* (L.Koch) (Araneae: Gnaphosidae). - Acta Arachnol., 44(1): 43-46.
Knoflach, B., 1992. Neue *Robertus*-Funde in den Alpen: *R. mediterraneus* Eskov und *Robertus* sp. - Ber. nat-med. Verein Innsbruck, 79: 161-171.
Knoflach, B., 1996a. *Steatoda incomposita* (Denis) from southern Europe, a close relative of *Steatoda albomaculata* (Degeer) (Araneaea: Theridiidae). - Bull. Br. arachnol. Soc., 10(4): 141-145.
Knoflach, B., 1996b. Die arten der *Steatoda phalerata*-Gruppe in Europa (Arachnida: Araneae, Theridiidae). – Mitt. Schweiz. Ent. Ges., 69: 377-404
Knoflach, B., 1999. The comb-footed spider genera *Neottiura* and *Coleosoma* in Europe (Araneae, Theridiidae). - Mitt. Schweiz. Ent. Ges., 72: 341-371.
Koponen, S., 1976(1977). Spider fauna (Araneae) of Kevo area, northernmost Finl-and. - Rep. Kevo Subarctic Res. Stat., 13: 48-62.
Koponen, S., 1994. Ground-living spiders, opilionids, and pseudoscorpions of peatlands in Quebec. - Mem. Ent. Soc. Canada, 169: 41-60.
Koponen, S.,1996. Diversity and similarity of northern spider faunas. - Acta Zool. Fennica, 201: 3-5.
Koponen, S., Marusik, Yu.M., Tanasevitch A.V., 1998. New data on the spider fauna of the Polar Urals (Aranei). - Arthropoda Sel., 6(3/4): 109-119.
Kronestedt. T., 1990. Separation of two species standing as *Alopecosa aculeata* (Clerck) by morphological, behavioural and ecological characters, with remarks on related species in the *pulverulenta* group (Araneae, Lycosidae). - Zool. Scripta, 19: 203-225.
Kronestedt. T., 1993. Two new species of *Lepthyphantes* (Araneae, Linyphiidae) new to Sweden. – Ent. Tidskr., 114(4): 147-149.
Kuminova, A.V., Sedelnikov, V.P., Maskaev, Yu.M., 1985. Plant cover and natural grasslands of Tuvan ASSR - Novosibirsk: “Nauka” Press, Siberian Branch, 256 pp. [In Russian]
Kulczyński, V., 1885. Pająki zebrane na Kamczatce przez Dra B. Dybowskiego. – Pam. Akad. umiej. Kraków, 11: 1-60.
Kulczyński, W., 1901. Arachnoidea. - In: Zoologische Ergebnisse der dritten asiatischen Forschungsreise des Grafen Eugen Zichy (ed. G. Hovarth), Budapest & Leipzig,

2: 311-369 + pls. 12-13.
Kulczyński, V., 1908. Araneae et Oribatidae expeditionum Rossicarum in insulas Novo-Sibiricas annis 1885-1886 et 1900-1903 susceptarum. - Mem. Acad. Imp. Sci. St.-Petersbourg. Ser.VIII. Cl. phys.-math., 18(7): 1-97.
Kulczyński, W., 1926. Arachnoidea camtschadalica. - Ann. Zool. Mus. AN USSR, 27(1): 29-72.
Leech, R.E., 1972. A revision of the Nearctic Amaurobiidae (Arachnida:Araneida) - Mem. ent. Soc. Canada, 84: 1-187.
Levi, H.W., 1957. The spider genera *Enoplognatha, Theridion*, and *Paidisca* in America north of Mexico (Araneae, Theridiidae). - Bull. Amer. Mus. Nat. Hist.,112(1): 1-123
Levi, H.W., 1971. The *diadematus* group of the orbweaver genus *Araneus* North of Mexico (Araneae: Araneidae). - Bull. Mus. Comp. Zool., 141(4): 131-179.
Levi, H.W., 1971(1972). The orb weaver genera *Singa* and *Hypsosinga* in America (Araneae: Araneidae). - Psyche, 78(4): 229-256.
Levi, H.W., 1974a. The orb-weaver genus *Zygiella* (Araneidea, Araneidae). - Bull. Mus. Comp. Zool.,146(5): 267-290.
Levi, H.W., 1974b. The orb-weaver genera *Araniella* and *Nuctenea* (Araneidea, Araneidae). - Bull. Mus. Comp. Zool., 146(6): 291-316.
Levi, H.W., 1975. The American orb-weaver genera *Larinia, Cercidia* and *Mangora* north of Mexico (Araneae, Araneidae). - Bull. Mus. Comp. Zool., 147(3): 101-135.
Levi, H.W., 1977. The American orb-weaver genera *Cyclosa*, *Metazygia* and *Eustala* north of Mexico (Araneae, Araneidae). - Bull. Mus. Comp. Zool., 148(3): 61-127.
Levi, H.W., 1977. The American orb-weaver genera *Metepeira, Kaira*, and *Aculeipeira* north of Mexico (Araneae: Araneidae). - Bull. Mus. Comp. Zool., 148(5): 185-238.
Levi, H.W., 1980. The orb-weaver genus Mecynogea, the subfamily Metinae and the genera *Pachygnatha*, *Gleognatha* and *Azilia* of the the subfamily Tetragna-thinae north of Mexico. - Bull. Mus. Comp. Zool., 149: 1-74.
Levi, H.W., 1981. The American orb-weaver genera *Dolichognatha* and *Tetragnatha* north of Mexico (Araneae: Araneida, Tetragnathinae). - Bull. Mus. Comp. Zool., 149(5): 271-318.
Levi, H.W. & D.E. Randolph, 1975. A key and check list of American spiders of the family Theridiidae north of Mexico (Araneae). - J. Arachnol., 3: 31-51.
Levy, G., 1998. Araneae: Theridiidae. - Fauna Palaestina, Arachnida III, Israel Acad. Sci & Humanit., 227 pp.
Li, W.L., Song, D.X., Zhu, M.S., 1999. A new record of spider of the genus *Ozyptila* from China (Araneae: Thomisidae). - Acta Arachnol. Sinica, 8(2): 68-69. [In Chinese]
Li, S.Q., Tao, Y., 1994(1995). A cheklist of Chinese linyphiid spiders (Araneae: Linyphiidae). - Beitr. Araneol., 4: 219-240.
Logunov, D.V., 1990. New data of the spider families Atypidae, Araneidae, Pisauridae and Thomisidae in the USSR fauna. - In (Ed. G.S. Zolotarenko) Tchlenistonogie i gelminty, “Nauka” Press, Novosibirsk: 33-43. [In Russian]

Logunov, D.V., 1991. The spider family Salticidae (Aranei) of Tuva. 1. Six new species from the genera *Sitticus*, *Bianor* and *Dendryphantes*. - Zool. Zhurnal, 70(6): 50-60. [In Russian]

Logunov, D.V., 1992a. A review of the spiders genus *Tmarus* Simon, 1875 (Araneae, Thomisidae) in the USSR fauna, with a description of a new species]. - Siberian Biol. Journal, 1: 61- 73. [In Russian]

Logunov, D.V., 1992b. On the spider fauna of the Bolshekhekhtsyrskiy Reserve (Khabarovsk Province). I. Families Araneidae, Lycosidae, Philodromidae, Tetragnathidae, Theridiidae, Thomisidae. - Siberian Biol. Journal, 4: 56-68. [In Russian]

Logunov, D.V., 1992c. The spider family Salticidae (Araneae) from Tuva. II. An annotated chek list of species. - Arthropoda Sel., 1(2): 47-71.

Logunov, D.V., 1993a. New data on the jumping spiders (Aranei, Salticidae) of Mongolia and Tuva. - Arthropoda Sel., 2(2): 47-53.

Logunov, D.V., 1993b. Notes on the *penicillatus* species group of *Sitticus* Simon, 1901, with a description of a new species (Araneae, Salticidae). - Genus, 4(1): 1-15.

Logunov, D.V., 1995a. New and little known species of the jumping spiders from Central Asia (Araneae: Salticidae). - Zoosystematica Rossica, 3(2): 237-246.

Logunov, D.V., 1994(1995). Contribution to the northern Asian fauna of the crab spider genus *Xysticus* C.L.Koch, 1835 (Aranei: Thomisidae). - Arthropoda Sel., 3(3/4): 111-118.

Logunov, D.V., 1996a. A critical review of the genera *Apollophanes* O.P.-Cambridge, 1898 and *Thanatus* C.L.Koch, 1837 in North Asia (Araneae, Philodromidae). - Revue Arachnologique, 11(13): 133-202.

Logunov, D.V., 1996b. A review of the genus *Phlegra* Simon, 1876 in the fauna of Russia and adjacent countries (Araneae: Salticidae: Aelurilinae). - Genus, 7(3): 533-567.

Logunov, D. V., 1996c. Preliminary report on the Euro-Siberian faunal connections of jumping spiders (Araneae, Salticidae). - Acta Zool. Fennica, 201: 71-76.

Logunov, D.V., 1997b. Taxonomic notes on some Central Asian philodromid species (Araneae Philodromidae). - Arthropoda Sel., 6(1/2): 99-104.

Logunov, D.V., 1998a. The spider genus *Neon* Simon, 1876 (Araneae, Salticidae) in SE Asia, with notes on the genitalia and skin pore structures. - Bull. Br. arachnol. Soc., 11(1): 15-22.

Logunov D.V., 1998b. *Pseudeuophrys* is a valid genus of the jumping spiders (Araneae, Salticidae). - Revue Arachnologique, 12(11): 109-128

Logunov, D.V., Cutler, B., Marusik, Yu.M., 1993. A review of the genus *Euophrys* C.L. Koch in Siberia and the Russian Far East (Araneae, Salticidae). - Ann. Zool. Fennici, 30: 101-124.

Logunov, D.V., Hęciak, S., 1996. *Asianellus*, a new genus of the subfamily Aelurillinae (Araneae, Salticidae). – Ent. Scand., 26: 103-117.

Logunov, D.V., Marusik, Yu.M., 1991. Redescriptions and morphological differenc-es of *Bianor aurocinctus* (Ohlert) and *B. aemulus* (Gertsch) (Aranei, Salticidae). - Siberian Biol. Journal, 2: 39-47. [In Russian]

Logunov, D.V., Marusik, Yu.M., 1994a. A faunistic review of the crab spiders (Araneae, Thomisidae) from the Mountains of South Siberia. - Bull. Inst. r. Sci. nat. Belg., Entomol., 64: 177-197.

Logunov, D.V., Marusik, Yu.M., 1994b. New data on the jumping spiders of the Palaearctic fauna. - Arthropoda Sel., 3(1-2): 101-115.

Logunov, D.V., Marusik, Yu.M., 1994(1995). Spiders of the family Lycosidae (Aranei) from the Sokhondo Reserve (Chita Area, East Siberia). - Beitr. Araneol., 4: 109-122.

Logunov, D.V., Marusik, Yu.M., 1998. A new species of the genus *Xysticus* from the mountains of South Siberia (Araneae, Thomisidae). - Bull. Br. arachn. Soc., 11(3): 103-106.

Logunov, D.V., Marusik, Yu.M., 1999. A brief review of the genus *Chalcoscirtus* Bertkau, 1880 in the fauna of Central Asia and the Caucasus (Araneae, Salticidae). - Arthropoda Sel., 7(3): 205-226.

Logunov, D.V., Marusik, Yu.M., 2000. Miscellaneous notes on the Palaearctic Salticidae (Arachnida, Araneae). - Arthropoda Sel., 8(1): in press.

Logunov, D.V., Marusik, Yu.M., Koponen, S., 1998. A check-list of the spiders in Tuva, South Siberia with analysis of their habitat distribution. - Ber. nat.-med. Verein Innsbruck, 85: 125-159.

Logunov, D.V., Rakov, S.Yu., 1996. A review of the spider genus *Synageles* Simon, 1876 (Araneae, Salticidae) in the fauna of Central Asia. - Bull. Inst. r. Sci. nat. Belg., Entomol., 66: 65-74.

Logunov, D.V., Rakov S. Yu., 1998. Miscellaneous notes on Middle Asian jumping spiders (Aranei: Salticidae). - Arthropoda Sel., 7(2): 117-144.

Loksa, I., 1965. 41. Araneae. Ergebnisse der zoologischen Forschungen von Dr. Z.Kaszab in der Mongolei. - Reichenbachia, 7(1): 1-32.

Loksa, I., 1972. Pokok II. - Araneae II. - Fauna Hungariae 109, XVIII(3): 1-112.

Marikovski, P.I., Marusik, Yu.M., 1985. *Araneus pallasi* (Aranei: Araneidae) - social spider in the USSR fauna. - Vestn. LGU, 17: 3-8. [In Russian]

Marusik, Yu.M., 1986. The orb-weaving genus *Larinia* Simon in the USSR (Aranei, Araneidae). - Spixiana, 9(3): 245-254.

Marusik, Yu.M., 1989a. Two new species of the spider genus *Xysticus* and synony-my of crab spiders (Aranei, Thomisidae, Philodromidae) from Siberia. - Zool. Zhurnal, 63(4): 140-145. [In Russian]

Marusik, Yu.M., 1989b. New data on the fauna and synonymy of spiders (Arachnida: Aranei) from the USSR. - Fauna and ecology of spiders and scorpions, Moscow: Nauka Press: 39-52. [In Russian]

Marusik, Yu.M., 1994. A check-list of spiders with trans-Palaearctic distribution. - Boll. Acc. Gionia Sci. Nat., 26(345): 273-279.

Marusik, Yu.M., 1994(1995). A review of the spider genus *Titanoeca* from Siberia (Arachnida: Araneae: Titanoecidae). – Beitr. Araneol., 4: 123-132.

Marusik, Yu. M., Chevrisov, B.P., 1990. Three new spiders from the Asian part of the USSR. - Reichenbachia, 27(15): 89-93.

Marusik, Yu.M., Cutler, B., 1989. Description of the males of *Dendryphantes czekanowskii*

Prószyński and *Heliophanus baicalensis* Kulczyński (Araneae, Salticidae). - Acta Arachnol., 37: 51-55.

Marusik, Y.M., Eskov, K.Y. Kim, J.P., 1992a. A check list of spiders (Aranei) of Northeast Asia. - Korean Arachnol.. 8(1/2):129-158.

Marusik, Yu.M., Eskov K.Yu., Logunov D.V., Basarukin, A.M., 1992b. A check-list of spiders (Arachnida Aranei) from Sakhalin and Kurile Islands. – Arthrop-oda Sel., 1(4): 73-85.

Marusik, Yu.M., Eskov, K.Yu., Koponen, S., Vinokurov, N.N., 1993. A check-list of the spiders (Aranei) of Yakutia, Siberia. - Arthropoda Sel., 2(2): 63-79.

Marusik Yu.M., Esyunin S.L., 1997(1998). A new species of the spider genus *Pelecopsis* Simon, 1864 (Aranei, Linyphiidae) from South Siberia. - Arthropoda Sel., 6(3/4): 105-108.

Marusik Yu.M., Hippa H., Koponen S., 1996. Spiders from the Altai area, South Siberia. - Acta Zoologica Fennica, 201: 11-45.

Marusik, Yu.M., Koponen, S., 1998. New and little known spiders of the subfamily Dictyninae (Araneae, Dictynidae) from South Siberia. - Entomol. Probl., 29(2): 79-86.

Marusik, Yu. M., Leech, R., 1993. The spider genus *Hypselistes*, including two new species, from Siberia and the Russian Far East (Araneida: Erigonidae). - Can. Entomol., 125: 1115-1126.

Marusik, Yu. M., Logunov, D.V., 1994(1995a). Gnaphosid spiders from Tuva and adjacent territories, Russia. - Beitr. Araneol., 4: 177-210.

Marusik, Yu.M., Logunov, D.V., 1994(1995b). The crab spiders of Middle Asia 2 (Arachnida: Araneae: Thomisidae). – Beitr. Araneol., 4: 133-175.

Marusik, Yu.M., Logunov, D.V., 1991(1995c). Poorly known spider species of the families Salticidae and Thomisidae (Aranei) from the Far East of USSR. - Entomological investigations in the North-East part of USSR, Vladivostok: FEB AS USSR, 2: 131-140. [In Russian]

Marusik, Yu. M., Logunov, D.V., 1998a. *Evarcha falcata* Clerck is a complex of three related species (Araneae, Salticidae). - Arthropoda Sel., 6(3/4): 95-104.

Marusik, Yu.M., Logunov, D.V., 1998b(1999). On the spiders (Aranei) collected in Mongolia during a joint American-Mongolian-Russian expedition in 1997. - Arthropoda Sel., 7(3): 233-254.

Marusik, Yu.M., Saaristo M.I., 1999. Review of east Palaearctic species of the genus *Minicia* Thorell, 1875 with descriptions of two new genera (Aranei: Linyphiidae: Erigoninae). - Arthropoda Sel., 8(2): 125-130.

Marusik Yu.M., Tanasevitch A.V., 1998. Notes on the spider genus *Styloctetor* Simon, 1884 and some related genera, with description of two new species from Siberia (Aranei: Linyphiidae). - Arthropoda Sel., 7(2): 153-159.

Marusik, Yu.M., Tarabayev, C.K., Litovchenko, A.M., 1990. The catalogue of orb-weaving spiders in Kazakhstan. Familia: Araneidae. - Khabarly Kaz.SSR Acad. Sci., 160(4): 14-23. [In Russian]

Medvedev, L.N., 1984. Quantitive method of zoogeographic analysis of a fauna. - VII All-

Union Zoogeographic Conference, Thesises of papers: 211-215 [In Russian]

Merrett, P., 1998. *Lathys puta* (O.P.-Cambridge, 1863) is a junior synonym of *Argenna subnigra* (O.P.-Cambrifge, 1861), not a senior synonym of *Lathys stigmatisata* (Menge, 1869) (Araneae: Dictynidae). - Bull. Br. Arachnol. Soc., 11(3): 120.

Mikhailov, K.G., 1987(1988). Contribution to the spider fauna of the genus *Micaria* Westring, 1851 of the USSR. 1. (Aranei, Gnaphosidae). - Spixiana,10(3): 319-334.

Mikhailov, K.G., 1990. The spider genus *Clubiona* Latreille 1804 in the Soviet Far East, 1. (Arachnida, Aranei, Clubionidae). - Korean Arachnol., 5(2): 139-175.

Mikhailov, K.G., 1992. The spider genus *Clubiona* Latreille, 1804 (Arachnida Aranei Clubionidae) in the USSR fauna: a critical review with taxonomic remarks. - Arthropoda Sel., 1(3): 3-34.

Mikhailov, K.G., 1996. A checklist of the spiders of Russia and other territories of the former USSR. - Arthropoda Sel., 5(1-2): 75-137.

Mikhailov, K.G., 1997. Catalogue of the spiders of the territories of the former Soviet Union (Arachnida, Aranei) - Moscow: Zoological Museum of the Moscow State University, 416 pp.

Mikhailov, K.G., Marusik, Yu.M., 1991(1995). Spiders of the north-east USSR. Families Clubionidae, Zoridae, Liocranidae and Gnaphosidae (genus *Micaria*) (Arachnida, Aranei). - Entomological investigations in the North-East part of USSR, Vladivostok: FEB AS USSR, 2: 90-113. [In Russian]

Miller, F., 1967. Studien über die Kopulationsorgane der Spinnengattung *Zelotes*, *Micaria*, *Robertus* und *Dipoena*, nebst Beschreibung einiger neuer oder unvollkommen bekannter Spinnenarten. - Acta Sci. Nat. Acad. Sci. Bohemoslov. (Brno), 1 (N.S): 251-298.

Millidge, A.F.,1975. Re-examination of the erigonine spiders *Micrargus herbigradus* and *Pocadicnemis pumila* (Araneae, Linyphiidae). - Bull. Brit. Arachnol. Soc., 3(6): 145-155.

Millidge, A.F., 1977. The conformation of the male palpal organs of Linyphiid spiders and its application to the taxonomic and phylogenetic analysis of the family (Araneae: Linyphiidae). - Bull. Brit. Arachnol. Soc., 4(1): 1-60.

Millidge, A.F., 1981a. The erigonine spiders of North America. Part 3. The genus *Scotinotylus* Simon (Araneae: Linyphiidae). - J. Arachnol., 9(2): 167-214.

Millidge, A.F., 1981b.The erigonine spiders of North America. Part 5. The genus *Satilatlas* (Araneae: Linyphiidae). - Bull. Amer. Mus. Nat. Hist., 170: 242-253.

Millidge, A.F., 1981c. A revision of the genus *Gonatium* (Araneae: Linyphiidae). - Bull. Brit. Arachnol. Soc., 5(6): 253-277.

Millidge, A.F.,1983. The erigonine spiders of North America, Part 6. The genus *Walckenaeria* Blackwall (Araneae, Linyphiidae). - J. Arachnol.,11(2): 105- 200.

Millidge, A.F., 1984. The erigonine spiders of North America. Part 7. Miscellaneous genera (Araneae, Linyphiidae). - J. Arachnol., 12(2): 121-169.

Namzalov, B.B., Korolyuk, A.Yu., 1991. Classification of the steppe vegetation of Tuva and SE Altai. - Novosibirsk, 84 pp. [In Russian]

Nikolić, F., 1981. Aranea. - Catalogus Faun. Jugosl., 3(4): 1-135.

Nyffeler, M., Dondale, C.D., Redner, J.H., 1986. Evidence for displacement of a North American spider *Steatoda borealis* by the European species *Steatoda bipunctata* (Araneae: Theridiidae). - Canadian J. Zool., 64(4): 867-874.

Odenwall, E., 1901. Araneae nonnulae Sibiriae Transbaicalensis. - Öfvers. Finska Vet.-Soc. Förhandl., 43: 255-273.

Ono, H., 1979(1980). Thomisidae aus Japan 3. Das Genus *Lysiteles* Simon 1895 (Arachnida: Araneae). - Senckenberg. biol., 60(3-4): 203-217.

Ono, H., 1988. A revisional study of the spider family Thomisidae (Arachnida, Araneae) of Japan. - National Science Museum, Tokyo, 252 pp.

Ono H., Marusik, Yu. M., Logunov, D. V. 1990. Spiders of the family Thomisidae from Sakhalin and Kurile Islands. - Acta Arachnol., 39: 7-19.

Opell, B.D., Beatty, J.A., 1976. The Nearctic Hahniidae (Arachnida, Araneae). - Bull. Mus. Comp. Zool., 147(9): 393-433.

Ovtcharenko, V.I., 1982. A systematic list of the spider family Gnaphosidae (Aranei) of the European part of the USSR and the Caucasus. - Entom. Obozr., 61(4): 830-844. [In Russian]

Ovtsharenko, V.I., Marusik, Yu.M., 1988. Spiders of the family Gnaphosidae (Aranei) in North-East USSR (Magadan Area). - Entomol. Obozr., 67(1): 204-217. [In Russian]

Ovtsharenko, V.I., Marusik, Yu.M., 1991(1995). Additional data on spiders of the family Gnaphosidae (Aranei) from North-East Asia. - Entomological investigations in the North-East part of USSR, Vladivostok: FEB AS USSR, 2: 114-130. [In Russian]

Ovtsharenko, V.I., Platnick, N.I., Marusik, Yu.M., 1995. A review of the Holarctic ground spider genus *Parasyrisca* (Araneae, Gnaphosidae). - Amer. Mus. Nov. 3147: 1-55.

Ovtsharenko, V.I., Platnick, N.I., Song, D.X., 1992. A review of the North Asian ground spiders of the genus *Gnaphosa* (Araneae, Gnaphosidae). - Bull. Amer. Mus. Nat. Hist. 212: 1-88.

Paik, K.Y., 1969. The Oxyopidae (Araneae) of Korea. - Thes. Coll. comm. 60th Birth. Dr In Sock Yang: 105-127.

Pakhorukov, N.M., 1981. Spiders of the family Linyphiidae of the USSR forest fauna. -Fauna and ecology of insects, Perm Univ. Press: 71-85. [In Russian]

Palmgren, P., 1974a. Die Spinnenfauna Finnlands und Ostfennoskandiens IV. Argiopidae, Tetragnathidae und Mimetidae. - Fauna Fennica, 24: 1-70.

Palmgren, P., 1974b. Die Spinnenfauna Finnlands und Ostfennoskandiens. V. Theridiidae und Nesticidae. - Fauna Fennica, 26: 1-54.

Palmgren, P., 1975. Die Spinnenfauna Finlands und Ostfennoskandiens. VI. Linyphiidae 1. - Fauna Fennica, 28: 1-102.

Palmgren, P, 1976. Die Spinnenfauna Finnlands und Ostfennoskandiens. VII. Linyphiidae 2. - Fauna Fennica, 29: 1-126.

Palmgren, P., 1977. Die Spinnenfauna Finnlands und Ostfennoskandiens. VIII. Argyronetidae, Agelenidae, Hahniidae, Dictynidae, Amaurobiidae, Titano-ecidae,

Segestriidae, Pholcidae und Sicariidae. Anhang: Bestimmungsta-belle der in Finnland representierten Spinnenfamilien und kommentiertes Register der Teile I-VIII der Spinnenfauna. - Fauna Fennica, 30: 1-50.

Peng, X.J., Xie, L.P., Xiao, X.Q., 1993. Salticids in China. - Hunan Normal Univ. Press, 270 pp. [In Chinese]

Peng, X.J., Yin, C.M., Kim, J.P., 1996. Two new species of the genus *Evippa* (Araneae: Lycosidae) from China. - Korean Arachnol., 12(1): 71-76.

Platnick, N.I., Dondale, C.D., 1992. The insects and arachnids of Canada. Part 19. The ground spiders of Canada and Alaska. Araneae: Gnaphosidae. -Research Branch Agriculture Canada Publ., 1875: 1-297.

Platnick, N.I., Song , D.X., 1986. A review of the zelotine spiders (Araneae; Gnaphosidae) of China. - Amer. Mus. Novitates, 2848: 1-22.

Pravdin, F.N., 1978. Ecological geography of insects of Middle Asia. - "Nauka" Press, Moscow, 271 pp. [In Russian]

Pravdin, F.N., Mishenko, L.L., 1980. Forming and evolution of ecological faunas in Middle Asia. - "Nauka" Press, Moscow, 156 pp. [In Russian]

Prószyński, J., 1971a. Revision of the spider genus *Sitticus* Simon, 1901 (Aranei, Salticidae) II. *Sitticus saxicola* (C. L. Koch, 1848) and related forms. - Ann. Zool., 28(10): 183-204.

Prószyński, J., 1971b. Redescriptions of the A.E. Grube's Siberian species of Salticidae (Aranei) in the collection of the Wroclaw Zoological Museum. - Ann. Zool., 28(11): 205-226.

Prószyński, J., 1979. Systematic studies on East Palaearctic Salticidae, 3. Remarks on Salticidae of the USSR. - Ann. Zool., 34(11): 299-369.

Prószyński, J., 1982. Salticidae (Araneae) from Mongolia. - Ann. hist. nat. Mus. Hung., 74: 273-294.

Rakov, S. Yu., Logunov, D. V. 1996. A critical review of the genus *Heliophanus* C.L. Koch, 1933, of Middle Asia and the Caucasus (Aranei Salticidae). Arthropoda Sel., 5 (3/4): 67-104.

Roberts, M.J., 1987. The spiders of Great Britain and Ireland 2. Linyphiidae. - Harley Books, Colchester, 204 pp.

Roberts, M.J., 1995. Collins Field Guide: Spiders of Britain & Northern Europe. - Harper Collins, London, 383 pp.

Růžička, V., Holec, M., 1998. New record of spiders from pond littorals in the Czech Republic. - Arachnol. Mitt., 16: 1-7.

Saaristo, M.I., 1971. Revision of the genus *Maro* O.P.-Cambridge (Araneae, Linyphiidae). - Ann. Zool. Fennici, 8: 463-482.

Saaristo, M., Eskov, K.Yu., 1996. Taxonomy and zoogeography of the hypoarctic erigonine spider genus *Semljicola* (Araneida, Linyphiidae). - Acta Zool. Fennica, 201: 47-69.

Saaristo, M.I., Tanasevitch, A.V., 1996. Redelimitation of the subfamily Micronetinae Hull, 1920 and the genus *Lepthyphantes* Menge, 1866 with description of some new genera. - Ber. Nat.-med. Verein Innsbruck, 83: 163-186.

Saaristo, M.I., Tanasevitch, A.V., 2000. Systematics of the *Bolyphantes-Poeciloneta* genus group of the subfamily Micronetinae Hull, 1920 (Arachnida: Araneae: Linyphiidae). - Reichenbachia, 33(32): 253-263.

Schenkel, E., 1936. Schwedisch-chinesische wissenschaftliche Expedition nach den nordwestlichen Provinzen Chinas. - Ark. Zool., 29A(1): 1-314.

Schenkel, E., 1953. Chinesische Arachnoidea aus dem Museum Hoangho-Peiho in Tientsin. - Bol. Mus. Nac. Rio de Jan.(N.S., Zool.), 119: 1-108.

Schenkel, E., 1963. Ostasiatische Spinnen aus dem Muséum d'Histoire naturelle de Paris. - Mem. Mus. natn. Hist. nat. Paris (A, Zool.), 25: 1-481.

Segers, H., 1987. Determinatieproblem in de *Philodromus aureolus* groep (Araneae: Philodromidae). - Nwsbr. Belg. Arachnol. Ver., 6: 9-15.

Segers, H., 1990. The identification and taxonomic status of *Philodromus praedatus* O.P.-Cambridge (Araneae, Thomisidae). -Revue Arachnol.,9(2): 11-14.

Song, D.X.,1986. A revision of the Chinese wolf spiders of the genus *Alopecosa* described by Schenkel (Araneae: Lycosidae). - Sinozoologia, 4: 73-82. [In Chinese]

Song, D.X., 1987. Spiders from agricultural regions of China (Arachnida: Araneae). - Agriculture Publishing House, Beijing, 376 pp. [In Chinese]

Song, D.X., Zhu, M.S., 1985. On two species of titanoecids from China (Araneae: Titanoecidae). - Sinozoologia, 3: 73-76. [In Chinese]

Song, D.X, Zhu, M.S., 1997. Fauna Sinica, Arachnida: Araneae, Thomisidae, Philodromidae. - Science Press, Beijing, 259 pp. [In Chinese]

Song, D.X., Zhu, M.S., Chen, J., 1999. The spiders of China. - Hebei Science & Technology Press, 640 pp.

Šternbergs, M.T., 1981. *Pardosa lusisi* - a new spider species of the family Lycosidae from Tuva. - Latvijas Entomologs, 24: 60-62. [In Russian]

Tanasevitch, A.V., 1982. A new genus and new species of spiders of the family Linyphiidae (Aranei) from the Bolshezemelskaya Tundra. - Zool. Zhurnal, 61(10): 1501-1508. [In Russian]

Tanasevitch, A.V., 1984a. New and little-known spiders of the family Linyphiidae (Aranei) from the Bolshezemelskaya Tundra. - Zool. Zhurnal, 63(3): 382-391. [In Russian]

Tanasevitch, A.V., 1984b. New species of spiders of the genus *Agyneta* Hull, 1911 (Aranei, Linyphiidae) from Siberia and Middle asia. - Biol. Nauki, 5: 47-53. [In Russian]

Tanasevitch, A.V.,1985. A study of spiders (Aranei) of the Polar Urals. - Fauna and Ecology of Spiders of the USSR, Proc. Zool. Inst. USSR Acad. Sci., 139: 52-62. [In Russian]

Tanasevitch, A.V., 1986. New and little-known species of *Lepthyphantes* Menge 1866 from the Soviet Union (Arachnida: Araneae: Linyphiidae). - Senckenberg. biol., 67: 137-172.

Tanasevitch, A.V., 1987. New species of *Lepthyphantes* Menge 1866 from the Soviet Far East, with notes on the Siberian fauna of this genus (Aranei, Linyphiidae). - Spixiana, 10(3): 335-343.

Tanasevitch, A.V., 1988. Some new *Lepthyphantes* Menge (Aranei, Linyphiidae) from Mongolia and the Soviet Far East. - Folia entomol. hung., 49:185-196.

Tanasevitch, A.V., 1988(1989a). The linyphiid spiders of Middle Asia (Arachnida: Araneae: Linyphiidae). – Senckenberg. biol., 69(1-3): 83-176.

Tanasevitch, A.V., 1989b. A review of the Palaearctic *Poeciloneta* Kulczynski (Aranei, Linyphiidae). - Spixiana, 11(2): 127-131.

Tanasevitch, A.V., 1992. Ne genera and species of the tribe Lepthyphantini (Aranei, Linyphiidae, Micronetinae) from Asia (with some nomenclatorial notes on linyphiids). - Arthropoda Sel., 1(1): 39-51.

Tanasevitch, A.V., 1995(1996). Two new genera of the family Linyphiidae from Tuva, South Siberia, Russia (Arachnida Aranei Linyphiidae). - Arthropoda Sel., 4(3/4): 65-69.

Tanasevitch, A.V., 1996. New species of genus *Incestophantes* Tanasevitch, 1992 from southern Siberia and the Far East, with notes on systematics of this genus (Arachnida: Araneae: Linyphiidae: Micronetinae). - Reichenbachia, 31(22): 113-122.

Tanasevitch, A.V., Eskov, K.Yu., 1987. Spiders of the genus *Lepthyphantes* (Aranei, Linyphiidae) in the fauna of Siberia and the Far East. - Zool. Zhurnal, 66(2): 185-197. [In Russian]

Tang, R.L., Urita, G.M., Song, D.X., 1993. Two new species of the genus *Alopecosa* from China (Araneae: Lycosidae). - Acta Arachn. Sinica, 2(2): 69-72. [In Chinese]

Tao, Y., Li, S.Q., Zhu C.D., 1994(1995). Linyphiid spiders of Changbai mountains, China (Aranaeae: Linyphiidae: Linyphiinae). - Beitr. Araneol., 4: 241-288.

Thaler, K., 1972. Über einige wenig bekannte Zwergspinnen aus den Alpen II. (Arachnida, Aranei, Erigonidae). - Ber. naturw.-med. Ver. Innsbruck, 59: 29-50.

Thaler, K.,1981. Bemerkenswerte Spinnenfunde in Nordtirol (Österreich). - Veröff. Mus. Ferdinandeum (Innsbruck), 61: 105-150.

Thaler, K., 1983. Bemerkenswerte Spinnenfunde in Nordtirol (Österreich) und Nachbarländern: Deckennetspinnen, Linyphiidae (Arachnida: Aranei). - Veröff. Mus. Ferdinandeum (Innsbruck), 63: 135-167.

Thaler, K., 1987. Über einige Linyphiidae aus Kashmir (Arachnida: Araneae). - Courier Forsch. Inst. Senckenberg, 93: 33-42.

Thaler, K., Knoflach, B., 1995. *Xysticus obscurus* Collett - eine arktoalpine Krabben-spinne neu für Österreich (Arachnida, Araneida: Thomisidae). - Ber. naturw.-med. Ver. Innsbruck, 82: 145-152.

Tullgren, A., 1944. Svensk spindelfauna. 3. Egentliga spindlar. Araneae. Fam. 1-4. Salticidae, Thomisidae Philodromidae och Eusparrassidae. - Stockholm, 157 pp.

Tullgren, A., 1946. Svensk spindelfauna. 3. Egentliga spindlar. Araneae. Fam. 5-7 Clubionidae, Zoridae och Gnaphosidae. - Stockholm, 141 pp.

Tullgren, A., 1955. Zur Kenntnis schwedischer Erigoniden. - Ark. Zool. (N.S.), 7: 295-389.

Utotchkin, A.S., 1968. A key to spider genus *Xysticus* in the USSR. - Perm Univ. Press, 1-73. [In Russian]

Yin, C.M., Wang, J.F., Zhu, M.S., Peng, X.J., Bao, Y.H., 1997. Arachnida Araneae: Araneidae. - Fauna Sinica, Science Press, Beijing: 460 pp. [In Chinese]

Yin, C.M., Peng, X.J., Xie, L.P., Bao, Y.H., Wang, J.F., 1997. Lycosids in China. - Hunan Normal Univ. Press, 317 pp. [In Chinese]

Yu, L.M., Song, D.X., 1988. On new species of wolf spiders from China (Araneae: Lycosidae). - Acta Zootaxon. Sinica, 13: 234-244. [In Chinese]

Wesołowska, W., 1986. A revision of the genus *Heliophanus* C.L.Koch, 1833 (Aranei: Salticidae). - Ann. Zool., 40(1): 1- 254.

Wesołowska, W., 1988. Redescriptions of the A. Grube's East Siberian species of spiders (Aranei) in the collection of the Natural History Museum at Wroclaw. - Ann. Zool. (Warsaw), 41(12): 403-414.

Wesołwska, W., Marusik, Yu.M., 1990. Notes on *Heliophanus camtschadalicus* Kulczynski, 1885 (Aranei, Salticidae) and the related species. - Korean Arachnol., 6(1): 91-100.

Wiehle, H., 1956. Spinnentiere oder Arachnoidea. X. 28. Familie Linyphiidae. – Tierwelt Deutschlands, 44: 1-337.

Wiehle, H., 1960. Spinnentiere oder Arachnoidea. XI. Micryphantidae. - Tierwelt Deutschlands, 47: 1-620.

Wunderlich, J., 1976. Zur Spinnenfauna Deutschlands. XVI. Zur Kenntnis der mitteleuropäischen Arten der Gattungen *Enoplognatha* Pavesi und *Robertus* O.P.C. (Araneida, Theridiidae). - Senckenberg. Biol., 57(1-3): 97-112.

Wunderlich, J., 1980. Revision der europäischen Arten der Gattung *Micaria* Westring 1851, mit Anmerkungen zu den übrigen paläarktischen Arten (Arachnida: Araneida: Gnaphosidae). - Zool. Beitr., 25(2): 233-341.

Wunderlich, J., 1994(1995a). Linyphiidae aus der Mongolei (Arachnida: Araneae). - Beitr. Araneol., 4: 479-529.

Wunderlich, J., 1994(1995b). Zwei bisher unbekannte Spinnen-Arten der Gattung *Micrargus* Dahl, 1886 aus Japan (Arachnida: Araneae: Linyphiidae). - Beitr. Araneol., 4: 531-534.

Zhu, M.S., 1998. Fauna Sinica, Arachnida, Araneae, Theridiidae. Science Press, Beijing, 436 pp. [In Chinese]

Zyuzin, A.A., Marusik, Yu.M., 1988. A new species of spiders of the genus *Acantholycosa* (Aranei, Lycosidae) from the East Siberia. - Zool. Zhurnal, 67(7): 1083-1085. [In Russian]

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