# A check-list of spiders (Aranei) from the Lazo Reserve, Maritime Province, Russia

# Систематический список пауков (Aranei) Лазовского заповедника, Приморье, Россия

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KEY WORDS: Aranei, Russian Far East, new synonyms, new record КЛЮЧЕВЫЕ СЛОВА: Aranei, дальний Восток России, новый синоним, новые находки

ABSTRACT. From the territory of the Lazo State Reserve, 244 species of spiders belonging to 31 families are reported. Two new synonyms are established: *Araneus seensis* Oliger, 1991 syn.n. = *Araneus ishisawai* Kishida, 1920 and *Gayenna sachalinensis* Saito, 1935 syn.n. = *Anyphaena pugil* Karsch, 1879. A genus and species, *Sernokorba pallidipatellis* (Bösenberg et Strand, 1906) is reported from Russia for the first time. *Ozyptila scabricula* (Westring, 1851) is first reported from the Russian Far East, and *Anyphaena pugil* is reported for the first time outside Sakhalin Area, Japan and Korean Peninsula. *Anyphaena pugil* and *Sernokorba pallidipatellis* are illustrated.

РЕЗЮМЕ. Систематический список пауков заповедника насчитывает 244 вида из 31 семейства. Установлено, что Araneus ishisawai Kishida, 1920 — является старшим синонимом Araneus seensis Oliger, 1991, syn.n., а Anyphaena pugil Karsch, 1879 — старшим синонимом Gayenna sachalinensis Saito, 1935, syn.n. На территории заповедника отмечен один новый род и вид для фауны России: Sernokorba pallidipatellis (Bösenberg et Strand, 1906). Ozyptila scabricula (Westring, 1851) впервые отмечена на Дальнем Востоке, а Anyphaena pugil впервые отмечена за пределами Сахалинской области, Японии и Корейского полуострова. Два вида Anyphaena pugil и Sernokorba pallidipatellis проиллюстрированы.

#### Introduction

Spiders of the south part of the Russian Far East are relatively well studied. The number of species found in this Area is about 750 [Marusik, 2007]. They belong to 38 families (the highest family diversity within Russia!). Nevertheless, there are many blank spots in Khabarovsk and the Maritime Provinces. Up to now the single studied local fauna in that part of Russia is the Bolshekhekhtsyrski Reserve (environs of Khabarovsk)

which encompasses 326 species [Marusik et al., 2007]. None of the local faunas in the Maritime Province is known in detail so far.

Within the Maritime Province, most efforts have been undertaken in a study of the fauna of the Lazo Reserve. Arachnological research in the Reserve and the whole province was started by Tatyana Oliger, who published her first paper on spiders of the Lazo Reserve [Oliger, 1980]. She worked in this reserve as scientific researcher responsible for all animals. In her first paper she reported 10 species from two families: Araneidae (4 species) and Lycosidae (6 species). Later she published another faunistic paper [Oliger, 1984] with records of 35 species, and a series of taxonomic works [Oliger, 1983a,b, 1985, 1991, 1993, 1994, 1998, 1999] where she described 12 species and one new genus (Oculocornia Oliger, 1985): Agelenidae (1), Araneidae (2), Atypidae (1), Cybaeidae (1), Gnaphosidae (1), Linyphiidae (3), Lycosidae (1) and Pholcidae (2). After Oliger moved to the Nizhnesvirski Reserve in Leningrad Area, the collecting of spiders in the reserve almost stopped. During the 1990s only a few paper were published in which some additional or new species were reported from the reserve [Eskov, 1992; Mikhailov, 1994, 1995; Logunov, 1998, 1999; Marusik & Logunov, 1998; Ovtsharenko & Platnick, 1998].

New studies of spiders in the Lazo Reserve were initiated in 1998 when a joint Russian–Finnish expedition visited the reserve, and a long-term cooperation on the study of spiders was established between the arachnologists and Yuri N. Sundukov, an entomologist (carabidologist) from the reserve. From the material collected by the joint Russian–Finnish expedition, and collections made by Sundukov, a special paper was published on the spiders of the Maritime Province [Marusik & Koponen, 2000]. This paper contains 41 new species records from the Reserve and the Lazo District. From consequent collections made by Sundukov and old material collected by Oliger, several more papers were published

on the fauna of the reserve [Logunov & Marusik, 1999, 2000; Logunov & Koponen, 2000; Marusik et al., 2003; Marusik & Omelko, 2008; Mikhailov, 2003; Oliger et al., 2002; Omelko, Marusik, 2008].

In this paper, I summarize all the literature and unpublished data on spiders of the Lazo Reserve.

#### Material and methods

Besides literature data, I have used in this paper my personal material collected in the reserve in 1998 and numerous material collected by Yu. Sundukov in 1999–2007. Since there is no check-list of spiders of the Maritime Province, in discussions on families I use species diversity of the entire south part of the Russian Far East (Amur Area, south part of Sakhalin Area, Khabarovsk and the Maritime Provinces).

Each species paragraph includes the data about collection localities within the reserve or its environs, total number of specimens examined, and literature references. If a species was reported in other combination or under different name I provide original name and combination. When possible I provided indication of habitat preferences, distribution, etc. Type localities where the holotype was collected are underlined. Species new to the fauna of Russia is marked with asterisk. Species distributed in the south part of the Russian Far East and in adjacent countries (Japan, Korea, and northeastern China) are addressed as having Palaearchaearctic range. Two localities lie outside of the reserve but in very close vicinity: Kiyevka and Benevskoye.

Specimens were photographed using an Olympus Camedia C-500 camera attached to an Olympus SZX12 stereomicroscope. The images were montaged using "CombineZM" image stacking software. Photographs were taken in dishes of different size with paraffin in the bottom. Different size holes were made in the bottom to keep the specimens in the right position.

#### Check-list

## AGELENIDAE (8)

Family has worldwide distribution and encompasses about 800 species in 50 genera [Platnick, 2008]. 26 species from 8 genera are known from Russia; of these, 15 species and 7 genera are reported from this part of the Russian Far East. Seven species were found in the Lazo Reserve. In Platnick's catalogue [2008] two genera, *Alloclubionoides* and *Paracoelotes* are treated in Amaurobiidae.

*Agelena labyrinthica* (Clerck, 1758). Korpad', 6 specimens. Funnel webs are placed among herbs and bushes. Transpalaearctic range.

Agelena silvatica Oliger, 1983. Sukhoi Klyuch, Benevskoye, 16 ♂♂♀♀ [Oliger, 1983b]; Korpad', 2 ♂♂ [sub. A. opulenta, Marusik & Koponen, 2000]. Funnel webs are placed among herbs and bushes. Palaearchaearctic range, Other than the Maritime Province, it is known in Korea, Japan and in northwestern China.

Agelenopsis potteri (Blackwall, 1846). without precise locality and dates, ♂♀ [sub Agelena naevia, Oliger, 1984]; Lazo, 1 ♂ [Marusik & Koponen, 2000]. Builds funnel webs. Nearctic species, recently introduced to Eurasia and known from several localities in the Maritime Province, in Khabarovsk Province, Kyrgyzstan and Ukraine.

Alloclubionoides amurensis (Ovtchinnikov, 1999). Korpad', Gorelaya Sopka Mt., Amerika, Korpad', 22 이 이 기우두 [Marusik, 2009]. Ground dweller. Palaearchaearctic range. Known also from the southernmost part of Khabarovsk Province and across Maritime Province.

*Alloclubionoides napolovi* (Ovtchinnikov, 1999). Korpad', Sukhoi River, Amerika, Prosyolochnaya, Gorelaya Sopka Mt., ♂♂♀♀. Ground dweller. Palaearchaearctic range. Known only from the Maritime Province.

Paracoelotes spinivulva (Simon, 1880). without precise locality and dates, ○♀ [sub Coelotes luctuosus Oliger, 1984]. Palaearchaearctic range. In Russia it is also known from Khabarovsk Province and Amur Area. Outside of Russia it is known from Korea and northeastern China.

*Tegecoelotes secundus* (Paik, 1971). Uglovaya, Petrova, Prosyolochny, 1 ♂ 5 ♀♀. Litter dweller. Palaearchaearctic range.

*Tegenaria domestica* (Clerck, 1758). Lazo, ♂♀. Synantropic, cosmopolitan.

#### ANYPHAENIDAE (1)

Anyphaenidae is medium-sized, globally distributed family with 508 species in 56 genera [Platnick, 2008]. Only three species of *Anyphaena* are known from Russia, and only one species occurs in the Far East.

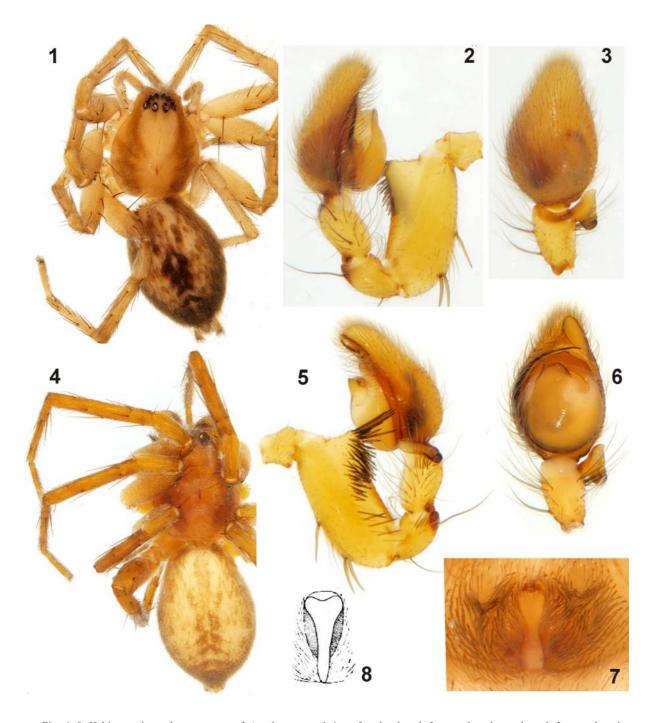
Anyphaena pugil Karsch, 1879 (Figs 1–8). Uglovaya Bay, 1 o, 23.11.2000 Yu.Sundukov. It is the first record of this species from mainland Russia. Earlier it was known from Sakhalin, Kuril, Japanese Islands and Korean Peninsula. It is tree and bush dwelling species. Study of the Anyphaena specimens from Kuril and Sakhalin Islands revealed that the only A. pugil occurs there. Comparison of these (Figs 1–7) specimens with descriptions and figures of Gayenna sachalinensis (Fig. 8) reveals that this species name is a junior synonym (Gayenna sachalinensis Saito, 1935, syn.n.).

#### ARANEIDAE (19)

Araneidae has a worldwide distribution. According to species number it is third largest family with about 3000 species in 166 genera [Platnick, 2008]. About 100 species and 18 genera are known in Russia. Of these, 56 species in 13 genera occur in the Russian Far East. So far, 19 species have been found in the reserve. There is no doubt that several more species and even genera can be found in the reserve, such as *Pronoides brunneus* Schenkel, 1936, and several species of *Cyclosa*. I expect than not fewer than 30 species occur in the reserve.

Aculepeira cf. matsudae Tanikawa, 1994. Korpad',  $1 \$  [Oliger et al., 2002]. It is known by one female from a single locality. Most probably it is a new species, as *A. matsudae* is known from Japan only.

Alenatea fuscocolorata (Bösenberg & Strand, 1906). Korpad', Kiyevka, Glazovka, Amerika, 13 ♂♂♀♀ [Oliger et al., 2002]. Orb-weaver webs occur among herbs and bushes. Palaearchaearctic range, known also from Khabarovsk Province, China, Korea and Japan.



Figs 1–8. Habitus and copulatory organs of *Anyphaena pugil*: 1 — female, dorsal; 2 — male palp, prolateral; 3 — male palp, dorsal; 4 — male, dorsal; 5–6 — male palp, retrolateral and ventral; 7–8 — epigyne, ventral. Male from the Lazo Reserve; female from Shikotan (Kuril Islands). 8 — after Saito [1959].

Рис. 1–8. Габитус и копулятивные органы *Anyphaena pugil*: 1 — самка, сверху; 2 — пальпа самца, пролатерально; 3 — плаьпа самца, дорсально; 4 — самец, сверху; 5–6 — пальпа самца, ретролатерально и вентрально; 7–8 — эпигинаБ вентально. Самец из Лазовского заповедника; самка из Шикотана (Курилы). 8 — по Saito [1959].

Araneus ishisawai Kishida, 1920. 3 km S of Sechingou Bay, Sukhoi Klyuch, Sechingou Gorge, 15 ♂ ♂♀♀ [sub A. seensis Oliger, 1991, Oliger, 1991]. Palaearchaearctic range. Known also from the Maritime Province, Korea and Japan. Judging from the verbal description and figures there are no doubts that A. seensis Oliger, 1991 syn.n. is a junior syn-

onym of *Araneus ishisawai* Kishida, 1920. *A. seensis* has an abdominal pattern and copulatory organs identical to those of *A.ishisawai*.

**Araneus macacus Uyemura, 1961.** Kiyevka, 7 ♂♂♀♀ [sub *A. ventricosus*; Oliger, 1981]; without precise locality and dates, ♂♀ [Oliger, 1984]; Korpad', Lazo, 3 ♂♂♀♀.

This is the largest orb-weaving spider of entire Russia. Webs are placed most often between trees at heights of 1.5 m and higher. Sometimes the frames are reaching 5 m. Palaearchaearctic range. Known also in Sakhalin, Kuril Islands, Khabarovsk Province, Amur Area, eastern Mongolia, Japan, Korea, and it most probably occurs in northeastern China.

**Araneus marmoreus Clerck, 1758.** Sukhoi Klyuch, Yegoryevka, Kiyevka, 13 ♂♂♀♀ [Oliger, 1981]; without precise locality and dates, ♂♀ [Oliger, 1984]; Korpad', 3 ♂♂♀♀. Orb-weaver webs are placed at heights of 0.5–2 m among herbs, bushes and trees. Holarctic range

Araneus stella (Karsch, 1879). Preobrazheniye Mt., Kiyevka, 3  $\ ^{\circ} \ ^{\circ} \$ [type locality of *A. maculifrons* Oliger; 1983, Oliger, 1983a]; Korpad', 3  $\ ^{\circ} \ ^{\circ} \$ . Orb-weaver webs are placed among herbs and bushes. Palaearchaearctic range. Known also from Amur Area to Japan.

*Araneus yasudai* Tanikawa, 2001. Petrova, 1 ○ [Oliger et al., 2002]. Small orb-weaver. Palaearchaearctic range. Besides the Lazo Reserve, it is known from the type locality in Hokkaido.

Araniella yaginumai Tanikawa, 1995. Korpad', 1 ♂ [Marusik & Koponen, 2000]. Orb-weaver. Palaearchaearctic range. Outside of the Far East, it is known from a single locality in Altai.

*Argiope bruennichi* (**Scopoli, 1772**). Korpad', 1 ♀. Orbweaver, webs are placed among grass. Transpalaearctic range.

**Chorizopes** ? sp. Syaochingou Bay, 1 ? ? [Oliger et al., 2002]. Small orb-weaver. Known to me by a single female. Without the male it is impossible to decide if it belongs to *Chorizopes* or represents a new genus. *Chorizopes* is not known in Russia.

Gibbaranea abscissa (Karsch, 1879). Korpad', 2 ♀♀ [Marusik & Koponen, 2000]. Orb-weaver. Palaearchaearctic range. It is known also from the Amur Area, Khabarovsk Province, Japan, Korea and northwestern China.

Hypsosinga clax Oliger, 1993. Kiyevka, 2 ♂♂♀♀ [Oliger, 1993]. Small orb-weaver. Webs are placed among grass a few centimeters above the ground. Known from two specimens only. It may be a junior synonym of the highly polymorphic H. sanguinea.

Hypsosinga sanguinea (C.L. Koch, 1844). Without precise locality and dates, > [Oliger, 1984]; Gorelaya Sopka Mt., Korpad', 3 ♂♂♀♀. Small orb-weaver, webs are placed among grass few cm above the ground. Transpalaearctic range. It is very likely that this is a senior synonym of *H. clax*.

*Larinia bonneti* Spassky, 1939. Kiyevka, 2 ♀♀ [Oliger et al., 2002]. Orb-weaver. Webs are placed among grass. Transpalaearctic, with a disjunct distribution between the Caucasus and the Far East.

*Larinia jeskovi* Marusik, 1986. Kiyevka,  $1 \supseteq [Oliger et al., 2002]$ . Orb-weaver, webs are placed among grass near water bodies. Transpalaearctic, with a disjunct distribution between Hungary and the Far East.

*Larinioides chabarovi* (Bachwalow, 1981). Without precise locality and dates, ♂♀ [sub *Araneus cornutus* Cl., Oliger, 1984]; Korpad', Valunovka, Benevskoye, 7 ♂♂♀♀ [Oliger et al., 2002]. Orb-weaver. Webs are placed among grass and bushes near water bodies. Palaearchaearctic range. Known also from Khabarovsk and Maritime provinces and from one locality along the Angara River.

Neoscona adiantum (Walckenaer, 1802). Kiyevka, Petrova Isl.,  $14 \circlearrowleft \circlearrowleft \circlearrowleft \hookrightarrow \hookrightarrow$  [sub Araneus adianta japonica Bos. et Str. & N. doenitzi Bos. et Str., Oliger, 1981], without precise locality and dates,  $\circlearrowleft \hookrightarrow$  [sub Araneus adiantum japonicus Bos. et Str. & N. doenitzi Bos. et Str., Oliger, 1984).

Korpad', 3  $\Im$ . Orb-weaver. Webs are placed among grass. Transpalaearctic range.

*Singa nitidula* (C.L. Koch, 1844). Without precise locality and dates,  $\mathcal{P}$  [Oliger, 1984]. Small orb-weaver. Webs are placed close to the ground among grasses. Transpalaearctic range.

Stroemiellus stroemi (Thorell, 1870). Korpad', 3 ♂♂♀♀ [sub "Zygiella" s., Marusik & Koponen, 2000]. Small orbweaver. Transpalaearctic range.

#### ATYPIDAE (1)

One of the smallest spider families with 3 genera and 33 species occurring in Eurasia, Africa and Nearctic [Platnick, 2008]. Three species of *Atypus* are known in Russia [Mikhailov, 1997] and two of them are restricted to the Far East. Only one species has been reported from the reserve.

Atypus medius Oliger, 1999. <u>Kiyevka</u>, Pashegou, 2 ♂♂ 3juv. [Oliger, 1999]. Known from the reserve and two more localities in the Maritime Province.

#### CHEIRACANTHIIDAE (1)

Family has worldwide distribution and encompass about 170 species in four genera. Most of authors consider this group of spiders either in Clubionidae or Miturgidae. In Russian,15 species of *Cheiracanthium* are known, of these 5 species were reported from the Far East, and only one species was found in the reserve. Occurrences of additional species are very likely.

*Cheiracanthium erraticum* (Walckenaer, 1802). Korpad', 1 ♀. Inhabits meadows and small shrubs. Transpalaearctic range.

## CLUBIONIDAE (24)

Worldwide distributed family with over 550 species in 14 genera [Platnick, 2008]. In Russia 72 species of *Clubiona* are known, 51 of these occur in the Far East. From the Lazo Reserve, 24 species were reported; however, the occurrence of 5–10 additional species is very likely.

Clubiona (C.) bakurovi Mikhailov, 1990. Tachinghou, 3 ♀♀ [Mikhailov, 2003]; Petrova, 1 ♂. Palaearchaearctic range. Known also from Khabarovsk and Maritime provinces, Korea and northwestern China.

*Clubiona (C.) caerulescens* **L. Koch, 1867.** Without precise locality, 2 ♂ ♂ [Mikhailov, 2003]. Transpalaearctic range.

Clubiona (Japoniona) coreana Paik, 1990. No exact locality and date, 23 ♂ ♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known also from Khabarovsk and Maritime provinces, Korea and northwestern China.

Clubiona (C.) eskovi Mikhailov, 1995. Petrova, 1 ♀ [Mikhailov, 1995]. Known from the type locality only.

Clubiona (C.) helenae Mikhailov, 2003. Sukhoi Klyuch, 1 ♂ [Mikhailov, 2003]. Palaearchaearctic range. Known from Maritime Province only.

Clubiona (C.) irinae Mikhailov, 1991. Without precise locality, 18 ♂♂♀♀ [Mikhailov, 2003]. Palaearchaearctic range, Known only from Far East Russia.

*Clubiona (Bucliona) jucunda* (Karsch, 1879). Sukhoi Klyuch, 1 ♂ [Mikhailov, 1994]. Palaearchaearctic range.

Known also from the south part of the Russian Far East, Japan, Korea and China.

Clubiona (C.) kimyongkii Paik, 1990. Without locality, 5 ♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known also from the south part of the Russian Far East, Korea and northwestern China.

Clubiona (C.) komissarovi Mikhailov, 1992. Sukhoi Klyuch, 2 ♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known only from Far East Russia.

Clubiona (C.) kurilensis Bösenberg et Strand, 1906. Without locality, 90 0 0 ♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known also from South Kamchatka to Sichuan.

Clubiona (C.) langei Mikhailov, 1991. Without exact locality, 4 ♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known only from Far East Russia.

Clubiona (C.) latericia Kulczyński, 1926. Petrova, 1 ♀ [Mikhailov, 2003]. Siberio–Alaskan range. Known also from Tuva to Chukotka and western Alaska, south to Maritime Province.

Clubiona (C.) mandschurica Schenkel, 1953. Korpad', 1 ♂ [Mikhailov, 2003]. Palaearchaearctic range. Known also from Far East Russia, Korea and China.

Clubiona (C.) microsapporensis Mikhailov, 1990. Without precise locality, 4 ♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known also from Far East Russia and Korea.

*Clubiona (C.) odesanensis* Paik, 1990. Korpad', 1 ♂ [Mikhailov, 2003]. Palaearchaearctic range. Known also from Far East Russia and North Korea.

Clubiona (C.) oligerae Mikhailov, 1995. Petrova, 1 ♀ [Mikhailov, 1995]. Palaearchaearctic range. Other than the Lazo Reserve, it is known from two localities in Maritime Province.

Clubiona (C.) papillata Schenkel, 1936. Without precise locality, 16 ♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known also from Khabarovsk and Maritime provinces and eastern China.

Clubiona (C.) propinqua L. Koch, 1879. Korpad', Gorelaya Sopka Mt., 14 ♂♂♀♀ [Mikhailov, 2003]. Siberio—Manchurian range. Known also from Yenisei to Chukotka and south to Maritime Province and North Korea.

Clubiona (C.) riparia L. Koch, 1866. Kiyevka, 2 ♀♀ [Mikhailov, 2003]. East Palaearctic – Nearctic range. In Eurasia known east of Ural to Chukotka, south to Japan and northwestern China.

*Clubiona (C.) rostrata* Paik, 1985. Korpad', 1 ♀ [Mikhailov, 2003]. Palaearchaearctic range. Known also in Far East Russia, Korea, Japan and China.

*Clubiona (C.) sapporensis* Hayashi, 1986. Without precise locality, 13 ♂ ♂♀♀ [Mikhailov, 2003]; Petrova, 1 ♂. Palaearchaearctic range. Known also from the Amur Area to South Kuril Islands, in Maritime Province, Hokkaido and Korea.

Clubiona (C.) sopaikensis Paik, 1990. Kiyevka, Gorelaya Sopka Mt., 4 ♂♂♀♀ [Mikhailov, 2003]. Palaearchaearctic range. Known only in Far East Russia and Korea.

*Clubiona (C.) zacharovi* Mikhailov, 1991. Petrova, 6 ♂♂ [Mikhailov, 2003]. Palaearchaearctic range. Known only in Far East Russia and North Korea.

Clubiona (C.) zyuzini Mikhailov, 1995. Sukhoi Klyuch,  $1 \$  [Mikhailov, 1995]. Palaearchaearctic range. Known by holotype female only.

## CORINNIDAE (4)

Worldwide distributed family with over 940 species in 77 genera [Platnick, 2008]. In Russia 17 species

belonging to five genera are known, eight of these from two genera reported from the Russian Far East. Four species of *Phrurolithus* were found in the reserve. The occurrence of *Trachelas japonicus* Bösenberg & Strand, 1906, in Lazo Reserve is very likely.

*Phrurolithus festivus* (C.L. Koch, 1835). Korpad', 1 ♀. Litter dwelling spider. Transpalaearctic range.

Phrurolithus hamdeokensis Seo, 1988. Lazo, 1 ♂ [Marusik & Koponen, 2000]. Litter dwelling spider. Palaearchaearctic range. Known also from the Maritime Province and Korea.

*Phrurolithus pennatus* Yaginuma, 1969. Korpad', 1 ♂ [Marusik & Koponen, 2000]. Litter dwelling spider. Palaearchaearctic range. Known also from the Maritime Province, Japan, northwestern China and Korea.

**Phrurolithus sinicus Zhu et Mei, 1982.** Korpad', 12 ♂♂♀♀ [Marusik & Koponen, 2000]. Mongolo–Manchurian range. Known also from Tuva to Maritime Province and south to Hubei.

#### CTENIDAE (1)

Worldwide distributed family restricted chiefly to tropical and subtropical areas. It encompasses about 450 species in 39 genera [Platnick, 2008]. Only one species of this family is known in Russia and the whole of the former Soviet Union.

Anahita fauna Karsch, 1879. Petrova,  $1 \stackrel{\frown}{\hookrightarrow} [Marusik \& Koponen, 2000]$ . Dwelling in litter and seashore pebbles. Palaearchaearctic range. Other than the Maritime Province, it is also known from Japan, Korea and eastern China.

## CYBAEIDAE (7)

Cybaeidae small family (161 species in 12 genera) with a disjunct Holarctic distribution [Platnick, 2008]. Five species of *Cybaeus* are known in Russia and four of these occur in Far East Russia. One species was described from the reserve. An unpublished revision of this family from the Far East reveals at least 10 new species, six of which are found in the reserve.

*Cybaeus confrantis* Oliger, 1994. <u>Petrova Isl.</u>, 14 ♂ ♂♀♀ [Oliger, 1994]; Korpad', 12 ♂ ♂♀♀. Litter dweller. Palaearchaearctic range. Known from type locality only.

*Cybaeus* sp. 1. Sukhoi River,  $1 \circlearrowleft$ . It is a new species. Besides the reserve it was found in several other localities.

*Cybaeus* sp. 2. Amerika, Prosyolochnaya,  $2 \stackrel{\frown}{\hookrightarrow} 1$ . It is a new species. Besides the reserve it was found in several other localities.

*Cybaeus* sp. 3. Korpad',  $11 \circlearrowleft 2 \circlearrowleft 2$ . It is a new species found only in the reserve.

*Cybaeus* **sp. 4.** Korpad', 13  $\circ$ <sup>1</sup> $\circ$ <sup>2</sup>  $\circ$  2  $\circ$ 9. Besides the reserve it was found in several other localities.

*Cybaeus* sp. 5. Korpad',  $1 \, \stackrel{\bigcirc}{\downarrow}$ . Besides the reserve it was found in several other localities.

*Cybaeus* sp. 6. Korpad', Syaogingou, Amerika, Prosyolochnaya, 9  $\circlearrowleft$  5  $\hookrightarrow$  Besides the reserve it was found in several other localities.

#### DICTYNIDAE (4)

Dictynidae has worldwide distribution and encompass over 560 species in 48 genera [Platnick, 2008]. In Russia 45 species and 12 genera of Dictynidae are

known. Four species and two genera were found in the reserve. Occurrence of additional species and genera (*Argenna*) are very likely.

Dictyna felis Bösenberg et Strand, 1906. Korpad', 2 Crass dwelling spider. Palaearchaearctic range. Known also from Japan, Korea and eastern China.

*Dictyna uncinata* Thorell, 1856. Korpad', 1 ♂. Dweller of shrubs and trees. Transpalaearctic range.

*Lathys taczanowskii* O. Pickard-Cambridge, 1873. Korpad', 6 ♀♀. Tree-bark dweller. East Palaearctic range. Known also from Ural to Maritime Province.

*Lathys* sp. Korpad', 5 \cong . Most likely it is a new species.

#### ERESIDAE (1)

Small family with 101 species in 10 genera [Platnick, 2008]. Its distribution is rather unusual: southern Eurasia, Africa and the Neotropics. Only one genus, *Eresus*, occurs in Russia. Exact number of species in Russia is unclear because of poorly developed taxonomy. Only one species of *Eresus* has been reported from Maritime Province and the reserve.

*Eresus* sp. Benevskoye, 2 ♂♂ [sub *E. niger*, Oliger, 1984]. Occurs in meadows. *E. niger* is a preoccupied name. Recently it was found that at least three species were treated under this name in Europe. It is most likely that the population from the Far East belongs to a separate species.

### **GNAPHOSIDAE (22)**

Gnaphosidae is seventh largest family according to the species diversity with 2032 species and 110 genera [Platnick, 2008]. Around 180 species in 26 genera are known in Russia. About 40 species and 11 genera are reported from the Russian Far East. In the Lazo Reserve, 22 species in 9 genera were found. One genus recently found in the Lazo Reserve is new to the Russian fauna. Occurrence of additional species of *Drassodes, Gnaphosa, Zelotes* and other genera such as *Drassyllus, Odontodrassus,* or *Urozelotes* is very likely.

*Callilepis schuszteri* (Herman, 1879). Gorelaya Sopka Mt., 1 ♀. Wandering ground dweller. Transpalaearctic with a disjunct distribution in Siberia. In the Far East Asia it is known from Maritime Province and eastern China.

*Drassodes cupreus* (Blackwall, 1834). Gorelaya Sopka Mt., 1 ♀. Wandering ground dweller. Transpalaearctic range.

*Drassodes pseudolesserti* Loksa, 1965. Korpad', 2 ♀♀. Wandering ground dweller. Known from South Siberia, Mongolia, northern China and Maritime Province.

*Drassodes serratidens* Schenkel, 1963. Korpad', 1 ♀. Wandering ground dweller. East Palaearctic range, Known also from Tibet to South Kuril Islands, north to South Siberia.

Gnaphosa gracilior Kulczyński, 1901. Petrova, 1 ♀ [Marusik & Koponen, 2000]. Wandering ground dweller. East Palaearctic distribution from Xinjiang to Chukotka, south to Mongolia and Maritime Province.

*Gnaphosa inconspecta* Simon, 1878. Korpad', 1 ♀. Wandering ground dweller. Transpalaearctic range.

Gnaphosa mongolica Simon, 1895. Korpad', 2 ♂♂. Wandering ground dweller. Palaearctic range, distributed from Hungary to the maritime Province.

Gnaphosa oligerae Ovtsharenko et Platnick, 1998. Amerika, Slukhe, Benevskoye, Kiyevka, 13 ♂♂♀♀ [Ovtsharenko & Platnick, 1998]. Wandering ground dweller. Palaearchaearctic range, known from the Maritime Province only.

Gnaphosa similis Kulczyński, 1926. without precise locality and dates [sub. G. muscorum, Oliger, 1984]; Korpad', Prosyolochnyi, 1 ♂ 3 ♀♀. Wandering ground dweller. Far Eastern species, known from Chita Area and eastern Mongolia to Chukotka and Maritime Province.

*Gnaphosa sticta* Kulczyński, 1908. Gorelaya Sopka Mt., 1 ♀. Wandering ground dweller. Transpalaearctic range.

*Haplodrassus taepaikensis* Paik, 1992. Korpad', 1 ♀. Wandering ground dweller. Palaearchaearctic range, Known also from Khabarovsk and Maritime provinces and Korea.

*Kishidaia albimaculata* (Saito, 1934). Without precise locality and dates [sub *Poecilichroa conspicua*, Oliger, 1984]; Gorelaya Sopka Mt., 1 ♀. Wandering grass and shrub dwelling spider. Palaearchaearctic range. Known also from Amur Area to Sakhalin Island, south to Japan and northwestern China.

*Micaria albimana* **O. Pickard-Cambridge, 1872.** Korpad', 1 ♀ [Marusik & Koponen, 2000]. Wandering ground dweller. Transpalaearctic with a disjunct distribution in Siberia.

*Micaria japonica* Hayashi, 1985. Lazo, 1 ♀ [Marusik & Koponen, 2000]. Wandering ground dweller. Palaearchaearctic range, Known also from maritime Province, Korea and Japan. It is quite possible that *M. japonica* is a junior synonym of *M. violens* described from Lazo Reserve.

*Micaria tripunctata* Holm, 1978. Amerika, 3 ♀♀ [Marusik & Koponen, 2000]. Wandering ground dweller. Circumholaretic range.

*Micaria violens* Oliger, 1983. <u>Kiyevka</u>, 1 ○ [Oliger, 1983b]. Wandering ground dweller. Palaearchaearctic range, and known only from the type locality. It is likely that this species is a senior synonym of *M. japonica*. Description of *M. violens* is not sufficient and holotype is lost.

**Phaocedus braccatus** (L. Koch, 1866). Korpad', 1 ♀ [Marusik & Koponen, 2000]. Wandering ground dweller. Transpalaearctic range.

Sernokorba pallidipatellis (Bösenberg et Strand, 1906)\* (Figs 9–12). Prosyolochnaya, 1–7.07.2006, Yu. Sundukov, 1 of Genus and species new to the fauna of Russia. Wandering grass and shrub dwelling spider. Palaearchaearctic range. Known also from Japan, Korea and eastern China. Its general appearance is very similar to that of *K. albimaculata* and the two species can be easily confused. Members of both genera can be easily distinguished by the shape of copulatory organs. Here I provide figures of *S. pallidipatellis* (Figs 9–12).

Zelotes exiguus (Müller et Schenkel, 1895). Korpad', 1 ♀ [Marusik & Koponen, 2000]. Wandering ground dweller. Transpalaearctic range.

Zelotes longipes (L. Koch, 1866) (?). Korpad', 1 \(\phi\). Wandering ground dweller. Transpalaearctic range.

**Zelotes potanini** Schenkel, 1963. Korpad', Gerasimov Spring, 2 ♀♀ [Marusik & Koponen, 2000]. Wandering ground dweller. East Palaearctic distribution from Xinjiang to Yakutia, south to Japan and northern China.

**Zelotes zhaoi Platnick et Song, 1986.** Korpad', 1 ♀ [Marusik & Koponen, 2000]. Wandering ground dweller. Palaearchaearctic range. Known only from the Maritime Province and Liaoning.

#### HAHNIIDAE (4)

Small, globally distributed family with 238 species in 26 genera [Platnick, 2008]. In Russia 14 species



Figs 9–12. Male of *Sernokorba pallidipatellis*: 9 — habitus; 10–12 — male palp, retrolateral, ventral and prolateral, respectively. Рис. 9–12. Самец *Sernokorba pallidipatellis*: 9 — габитус; 10–12 — пальпа самца, ретролатерально, вентрально и пролатерально, соответственно.

from five genera are known. Five species and two genera were reported from the Russian Far East, four of these were found in the reserve. The occurrence of another species and genus, *Cryphoeca silvicola*, in the reserve is very likely.

Hahnia corticicola Bösenberg et Strand, 1906. Korpad', Amerika, Prosyolochnyi, Gerasimov, Lazo, 72 이 하수 [Marusik & Koponen, 2000]. Ground litter dwelling spider. East Asian distribution, known from the Kolyma River upper reaches to Taiwan.

*Hahnia nava* (Blackwall, 1841). Korpad', 2 ♀♀. Ground litter dwelling spider. Transpalaearctic range.

*Hahnia ononidum* Simon, 1875. Korpad', 1 ♂. Ground litter dwelling spider. Holarctic range.

Neoantistea quelpartensis Paik, 1958. Prosyolochnyi, 2 o o o Ground dweller. Palaearchaearctic range.

#### LEPTONETIDAE (1)

Small Holarctic family with 203 species in 15 genera [Platnick, 2008]. Only one unidentified species was reported from Russia in the Lazo Reserve.

"Leptoneta" sp. Sukhoi Klyuch,  $1 \neq [\text{Oliger et al.}, 2002]$ . A single female was found in a scree. Identification of female specimens in this family is almost impossible. The finding of a leptonetid in the reserve is the northernmost record in Asia. Most likely it is a species new to science.

## LINYPHIIDAE (36/41)

It is the second largest spider family with world-wide distribution. Over 4345 species in 576 genera are

known [Platnick, 2008]. About 770 species of Linyphiidae are known in Russia, and over 280 species were reported from the Russian Far East. Not fewer than 40 species were found in the reserve. I was not able to identify five species represented in collections by females only. It is very likely that most of them belong to undescribed species and even undescribed genera. Judging from other localities studied in Far East, the total number of linyphiids in the reserve is estimated to be around 100 species.

*"Arcuphantes"* sp. Sukhoi Klyuch, 15 ♂♂♀♀ [Oliger et al., 2002]. Collected in a scree. Most probably it is new to science.

Allomengea dentisetis Grube, 1861. Petrova, 4 ♀♀. Ground dwelling spiders. East Palaearctic – Nearctic range.

*Anguliphantes zygius* (Tanasevitch, 1993). Amerika, 1 ♀. Litter dweller. Palaearchaearctic range.Known only from the Maritime Province and Jilin.

*Asiophantes pacificus* Eskov, 1993. Petrova, 1 ○ [Oliger et al., 2002]. Litter dweller. Palaearchaearctic range. Known from the Maritime Province only.

Astenargoides kurtchevae Eskov, 1993. Petrova, 2 ♀♀. Litter dweller. Palaearchaearctic range. Known from the Maritime Province only.

*Bathyphantes eumenis* (L. Koch, 1879). Korpad',  $1 \stackrel{\frown}{\circ}$ . Litter dweller. Holarctic range.

Centromerus amurensis Eskov et Marusik, 1994. Petrova, 1 ♂. Litter dweller. Palaearchaearctic range. Known only from Russia (Maritime and Khabarovsk provinces and Amur Area).

*Ceratinella brevis* (Wider et Reuss, 1834). Without precise locality and dates [Eskov, 1992]. Litter dweller. Transpalaearctic range.

**Ceratinella rosea** Oliger, 1985. Sokolovka, 3 이 이 아무무 [Oliger, 1985]. Most probably this name is a junior synonym of trans-Palaearctic *C. scabrosa* (O. Pickard-Cambridge, 1871).

*Collinsia submissa* (L. Koch, 1879). Korpad', Prosyolochnyi, 4 ♂ ♂♀♀. Ground dweller. Transpalaearctic range.

*Crispiphantes rhomboideus* (Paik, 1985). Petrova, 1 ♀. Litter dweller. Palaearchaearctic range. Known also from Korea, northeastern China and in Russian south Far East.

*Dicymbium yaginumai* Eskov et Marusik, 1994. Amerika, 4 ♀♀ [sub *D. libidinosum*, Marusik & Koponen, 2000]. Litter dweller. Far East Asian – Alaskan distribution. Known also from Maritime Province, Sakhalin Island and Alaska.

**Doenitzius purvus Oi, 1960.** Petrova, 1 ♀. Litter dweller. Palaearchaearctic range. Known also from northeastern China, Maritime Province, Korea and Japan.

*Floronia exornata* (L. Koch, 1878). Kordad', 1 ♀ [Marusik & Koponen, 2000]. Litter dweller. Palaearchaearctic range. Known also from northeastern China, Maritime Province and Japan.

Gnathonarium dentatum (Wider, 1834). Without precise locality and dates, ♀ [Oliger, 1984]. Litter dweller. Transpalaearctic range.

Gonatium japonicum Oi, 1960. Korpad', 4 ♀♀. Litter dweller. Palaearchaearctic range. Known also from China, Maritime Province and Japan.

Gonatium pacificum Eskov, 1989- Lazo, 1 ♂. Litter dweller. East Asian species known from Mongolia to Chukotka, south to Maritime Province.

*Hylyphantes graminicola* (Sundevall, 1830). Without precise locality and dates, ♂ [Oliger, 1984]; [sub *Erigonidium g.*, Oliger, 1984]. Transpalaearctic range.

*Maro pansibiricus* Tanasevitch, 2006. Without precise locality and dates [sub. *M. flavescens*, Eskov, 1992]. Litter dwelling spider. East Palaearctic distribution (from Ural to Kolyma River and south to Maritime Province).

*Micrargus herbigradus* (Blackwall, 1854). Korpad', 1 ♂. Litter dweller. Transpalaearctic range.

*Microneta viaria* (Blackwall, 1841). Without precise locality and dates, ♂ [Oliger, 1984]; Korpad', Amerika, Prosyolochnyi, Petrova, 9 ♂ ♂♀♀. Litter dweller. Holarctic range.

Neriene clatratha (Sundevall, 1830). Korpad', 1 od. Grass-shrub dweller. Holarctic range.

*Neriene emphana* (Walckenaer, 1841). Without precise locality and dates,  $\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\ ^{?}\$ 

*Neriene japonica* (Oi, 1960). Korpad', 1 ♂. Grass-shrub dweller. Palaearchaearctic range. Known also from Khabarovsk Province to South Kuril Islands and south to South China.

*Neriene radiata* (Walckenaer, 1841). Korpad', 2 ♂♂♀♀. Grass-shrub dweller. Holarctic range.

Neserigone basarukini Eskov, 1992. Korpad', 2 ♀♀. Litter dweller. Palaearchaearctic range. Known also from the Maritime Province, Sakhalin, South Kuril Islands and Japan.

Oculocornia orientalis Oliger, 1985. Sokolovka, 1 ♂ valley forest [Oliger, 1985; Gnelitsa & Marusik, 2006]. Litter dweller. Palaearchaearctic distribution; known from holotype locality only.

*Oinia clava* (Zhu et Wen, 1980). Amerika, 1 od. Litter dweller. Palaearchaearctic range. Known also from Amur Area, Khabarovsk and Maritime provinces, Korea and northwestern China.

*Oreonetides badzhalensis* Eskov, 1991. Korpad', 1 ♂. Litter dweller. Palaearchaearctic range. Known from Khabarovsk and Maritime provinces.

*Ostearius melanopygius* (O. Pickard-Cambridge, 1879). Petrova, 3 ♀♀ [Marusik & Koponen, 2000]. Ground dweller. Cosmopolitan. Within Russia it is known from the Lazo Reserve only.

*Pacifiphantes zakharovi* Eskov et Marusik, 1994. Amerika, Prosyolochnyi, 2 ○ [Marusik & Koponen, 2000]. Litter dweller. Palaearchaearctic range. Known also from Khabarovsk and Maritime provinces and northeastern China.

Pelecopsis nigroloba Fei, Gao et Zhu, 1995. Korpad', 14 ♂♂♀♀ [Marusik & Koponen, 2000]. Litter dweller. Palaearchaearctic range. Known from Maritime Province and Jilin

**Porrhomma longjiangense Zhu et Wang, 1983.** Gerasimov River [Marusik & Koponen, 2000]. Ground dweller. East Asian distribution. Known from Kolyma to northwestern China.

Styloctetor lehtineni Marusik et Tanasevitch, 1999. Gerasimov River [Marusik & Koponen, 2000]. Ground dweller. East Palaearctic distribution (from Ural to Chukotka, south to Maritime Province).

*Trematocephalus cristatus* (Wider, 1834). Without precise locality and dates, ♂ [Oliger, 1984]. Transpalaearctic range.

*Walckenaeria orientalis* (Oliger, 1985). Sokolovka, ♂ [sub *Cornicularia o.*, Oliger, 1985]; Petrova, Korpad', 3 ♂ ♂ [Marusik & Koponen, 2000]. Litter dweller. Palaearchaearctic range, distribution. Known also from Maritime Province, Korea and northwestern China.

#### LIOCRANIDAE (2)

Small family with global distribution encompassing 163 species in 29 genera [Platnick, 2008]. Four genera and 11 species of Liocraniidae are known in Russia. In Russian Far East three *Agroeca* species have been reported.

Agroeca cf. coreana Namkung, 1989. Korpad',  $9 \stackrel{\curvearrowleft}{\hookrightarrow}$ . Ground dweller. It is possible that a species from the reserve belongs to *A. coreana*, known so far only from Korea.

**Liocranidae gen. sp.** Korpad',  $2 \circlearrowleft \P$ . Most probably it is a new genus and a new species.

#### LYCOSIDAE (20/23)

Lycosidae is forth largest globally distributed family with 2334 species in 110 genera [Platnick, 2008]. At least 210 species of wolf spiders are known in Russia, of these about 60 species were reported from the Russian Far East. 23 species of lycosids were found from the reserve. Only 20 of these can be identified to species level. The occurrence of additional species in the Lazo reserve is very likely.

**Acantholycosa lignaria** (Clerck, 1758). Gorelaya Sopka Mt., 1  $\stackrel{\frown}{\circ}$ . Wandering ground dwelling spiders. Transpalaearctic range.

Acantholycosa oligerae Marusik, Azarkina et Koponen, 2003. Sukhoi Klyuch, 12 ♂午♀ [Marusik et al., 2003]. Wandering petrophilous spider. Palaearchaearctic distribution, and known from the type locality only.

Acantholycosa sundukovi Marusik, Azarkina et Koponen, 2003. Amerika, 1 o [Marusik et al., 2003]. Wonder-

ing petrophilous spider. Palaearchaearctic distribution, and known from type locality only.

Alopecosa hokkaidensis Tanaka, 1985. Gorelaya Sopka Mt., Korpad', 3 😜. Wondering ground dwelling spider. Palaearchaearctic range. Known also from Khabarovsk and Maritime provinces, Hokkaido and northwestern China.

Alopecosa kaplanovi Oliger, 1983. Perekatnaya River valley (10 km from Korkamenka Vil.), Benevskoye, Sukhoi Klyuch, 13 ♂ ♂♀♀ [Oliger, 1983a]; Amerika, Petrova, Sandagou, 3 ♀♀ [Omelko & Marusik, 2008]. Wandering epigeian spider. Palaearchaearctic range. Known from Maritime Province only, but most likely occurs in adjacent Korea and China.

Alopecosa tanakai Omelko et Marusik, 2008. Sokolovka, 8 ♂ ♀♀ [sub. A. argenteopilosa Schenkel, Oliger, 1981]; without precise locality and dates, ♂♀ [Oliger, 1984]; Kiyevka, [Omelko & Marusik, 2008]. Wandering epigean spider. Palaearchaearctic distribution, known also from the Maritime Province and adjacent Heilongjiang. Most likely it also occurs in Korea.

Arctosa keumjeungsana Paik, 1994. Korpad', 2 ♂♂ [Marusik & Koponen, 2000]. Wandering epigean spider. Palaearchaearctic range. Known from Maritime Province and South Korea.

*Pardosa adustella* Roewer, 1954. Korpad', Prosyolochnyi, 9 ♂ ♂♀♀. Wandering epigean spider. Siberian distribution. Known also from Cisbaikalia to Chukotka, south to Maritime Province.

**Pardosa astrigera** L. Koch, 1878. Korpad', 1 ♀. Wandering ground-dwelling spider. East Palaearctic range. Known also from Tuva to Kuril Islands, south to Japan and South China

**Pardosa brevivulva Tanaka, 1975 (?).** Korpad', 9 ♂ ♥♥. Wandering ground-dwelling spider. Palaearchaearctic range. Known also from Maritime Province, Japan and northwestern China.

**Pardosa hanrasanensis Jo & Paik**, **1984**. Petrova, Korpad', Prosyolochnyi, 4 ♀♀. Wandering ground-dwelling spider. Palaearchaearctic range. Known also from Maritime Province, Korea and northwestern China.

**Pardosa isago** Tanaka, 1977. Korpad', 5 ♀♀ [Marusik & Koponen, 2000]. Wandering ground-welling spider. Palaearchaearctic range. Known from the Maritime Province, Japan, Korea and China.

Pardosa cf. lugubris. Sokolovka, Sukhoi Klyuch, 18 ♂♂♀♀ [sub P. lugubris, Oliger, 1981]; without precise locality and dates, ♂♀ [sub P. lugubris, Oliger, 1984]; Korpad', Gorelaya Sopka Mt., 5 ♂♂♀♀. Wandering ground-dwelling spider. It is species new to science distributed in Maritime and Khabarovsk provinces, Sakhalin, Kuril Islands, Japan and Korea.

**Pardosa plumipes** (Thorell, 1875). Kiyevka, 4 ♂♂ [sub. *P. pontica* Thorell, Oliger, 1981]; without precise locality and dates, ♂ [Oliger, 1984]; Korpad', 1♀. Wandering ground-dwelling spider. Transpalaearctic range.

*Pirata yaginumai* Tanaka, 1974. Korpad', 1 ♂. Wandering ground dwelling spider. Palaearchaearctic distribution, found across whole the Palaearchaearctic.

*Triccosta ipsa* (Karsch, 1879). Kordad',  $1 \supseteq [Oliger et al., 2002]$ . Wandering ground dwelling spider. Palaearchaearctic range. Known from the Maritime Province, Japan and Korea.

*Trochosa ruricola* (De Geer, 1778). Kiyevka, 1 ♂ [Oliger, 1981]; Kiyevka, 1 ♂ [Oliger, 1984]; Korpad', 2 ♂♀. Wandering ground-dwelling spider. Transpalaearctic

range. [Have not specimens of this species been found in North America?]

*Trochosa spinipalpis* (F.O. Pickard-Cambridge, 1895) (?). Amerika, Kiyevka, 6 ♀♀ [Oliger, 1981]; without precise locality and dates, ¬¬♀ [Oliger, 1984]. Wandering ground-dwelling spider. Transpalaearctic range. It is most likely that species was incorrectly identified.

*Trochosa terricola* Thorell, 1856. Kiyevka, Sokolovka, 11 ♂♂♀♀ [Oliger, 1981]; without precise locality and dates, ♂♀ [Oliger, 1984]; Korpad', 3 ♂♂♀♀. Wandering ground-dwelling spider. Holarctic range.

*Xerolycosa nemoralis* (Westring, 1861). Gorelaya Sop-ka Mt.,  $1 \stackrel{\frown}{\circ}$ . Wandering ground-dwelling spider. Transpalae-arctic range.

#### MIMETIDAE (1)

Mimetidae is relatively small, globally distributed family with 153 species in 13 genera [Platnick, 2008]. Seven species from two genera of mimetids are known in Russia. Four species and one genus of Mimetidae have been reported from south part of the Russian Far East. So far, only one species is known from the reserve, but occurrence of another species is very likely.

*Ero japonica* Bösenberg et Strand, 1906. Kordad', 3 ♀♀ [Marusik & Koponen, 2000]. Palaearchaearctic range. Known from Japan, Korea and Maritime Province.

#### NESTICIDAE (1)

Small sheet web building globally distributed spider family with 206 extant species in 9 genera [Platnick, 2008]. Seven nesticid species of four genera are known in Russia, of these only one species occurs in the Maritime Province.

Howaia kerzhneri Marusik, 1987. Petrova, 3 ♀♀. Ground-dwelling spider, occurs in litter and screes. Palaearchaearctic range. Known in Russia only: Amur Area, Khabarovsk and Maritime Provinces.

## OXYOPIDAE (1)

A relatively small, globally distributed family with 426 species in 9 genera [Platnick, 2008]. One genus with four species is known in Russia. Only one species of *Oxyopes* was reported from the Russian Far East.

**Oxyopes licenti** Schenkel, 1953. Gorelaya Sopka Mt., Korpad', 9 ♂♂♀♀. Wandering grass and shrub dweller. East Palaearctic range. Known from Altai to Kolyma, south to northern China.

## PHILODROMIDAE (4)

A relatively small, globally distributed family with 530 species in 29 genera. Five genera and 61 species are known in Russia, of these 28 species and four genera were reported from the Russian Far East. Only four species of philodromid spiders were found in the reserve, but occurrence of additional species of *Thanatus*, *Philodromus* and *Tibellus* is very likely.

*Philodromus lanchowensis* Schenkel, 1936. Uglovaya Bay, ♀. Herb-bush-dwelling wandering spider. Palaearchaearctic range.

*Thanatus* cf. *miniaceus* Simon, 1880. Gorelaya Sopka Mt., 1 ♀. Herb-dwelling wandering spiders, known from Japan, Korea, Far East Russia and China.

**Thanatus coreanus Paik, 1879.** Kiyevka,  $\[ \]$  [sub. T. formicinus, Oliger, 1984]; Korpad',  $\[ \]$  Wandering ground-dweller. East Palaearctic range. Known from Tuva to Maritime Province, south to Korea and Hebei.

*Tibellus oblongus* Walckenaer, 1802. Korpad', 1 ♀. Herb-shrub dweller. Holarctic range.

## PHOLCIDAE (3)

A large globally distributed family with about 1000 species and 85 genera [Platnick, 2008]. In Russia 11 species of three genera of pholcid spiders have been found, of these three species of *Pholcus* were reported from the Russian Far East, and all of them were found in the reserve.

**Pholcus manueli** Gertsch, 1937. C. Lazo, 3 ♂♂♀♀ [sub *P. affinis* Schenkel, Marusik & Koponen, 2000]. Meshweb builder, often synantropic. Palaearchaearctic range. Known from Khabarovsk and Maritime provinces, Japan, Korea and China. It was introduced to the USA.

**Pholcus phungiformes Oliger**, **1983**. <u>Kiyevka</u>, seashore near Petrova Isl., 32 ♂♂♀♀ [Oliger, 1983b, 1998]; Korpad', 5 ♂♂♀♀. Mesh-web builder, often synantropic. Palaearchaearctic range. Known from Khabarovsk and Maritime provinces, Sakhalin and South Kuril Islands.

Pholeus zichyi Kulczyński, 1901. Sukhoi Klyuch, 8 ♂♂♀♀ [type locality of P. minutus Oliger, 1998, Oliger, 1998]. Mesh-web builder, petrophilous species. East Palaearctic range. Known from Central Mongolia south to Taiwan.

#### PISAURIDAE (2)

Relatively small family with 336 species in 52 genera [Platnick, 2008]. Nine species from two genera are known from Russia. Five species of two genera have been reported from the Russian Far East. Two species and two genera of pisaurid spiders were found in the reserve. Occurrence of few additional species is very likely.

**Dolomedes sulfureus** L. Koch, 1878. Sukhoi Klyuch, ♀ [Oliger, 1984]. Wandering ground-dweller. Palaearchaearctic distribution (Maritime Province, Japan, Korea and China).

*Pisaura ancora* Paik, 1969. Korpad', 1 ♂. Wandering herb-shrub-dweller. East Palaearctic distribution (from Tuva to Khabarovsk Province, south to Korea).

# SALTICIDAE (32)

Salticidae — the largest globally distributed family with 5188 extant species in 560 genera [Platnick, 2008]. Over 180 species of salticid spiders are known in Russia, of these 32 species were found in the Reserve. Occurrence of additional species is very likely.

Asianellus festivus (C.L. Koch, 1834). Without precise locality, 12 ♂♂♀♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]; Lazo, Petrova, Gorelaya Sopka Mt., 7 ♂♂♀♀. Ground dweller. Transpalaearctic range.

Carrhotus xantogramma (Latreille, 1819). Without precise locality, 20 ♂ ♀♀ [Logunov & Koponen, 2000; Lo-

gunov & Marusik, 2000]; Korpad', 1  $\stackrel{\frown}{}$ . Shrub and tree dweller. Transpalaearctic range.

Chalcoscirtus tanya Logunov et Marusik, 1999. Gorelaya Sopka Mt., 2 ♀♀ [Logunov & Marusik, 1999]. Petrophilous ground dweller. Palaearchaearctic distribution, known from the Maritime Province only.

*Dendryphantes czekanowskii* (Grube, 1861). Korpad', 1 ♀ [Logunov & Koponen, 2000]; Gorelaya Sopka Mt. [Logunov & Marusik, 1999, 2000]. Herb-shrub dweller. East Palaearctic distribution (east of Yenisei River).

*Euophrys frontalis* (Walckenaer, 1802). Amerika, 2 ♂♂ [Logunov & Marusik, 1999, 2000]; Gorelaya Sopka Mt., 3 ♂♂♀. Litter dweller. Transpalaearctic with disjunct distribution in Siberia.

*Euophrys kataokai* Ikeda, 1996. Without precise locality,  $1 \ ^{\circ}$  [Logunov & Koponen, 2000; Logunov & Marusik, 2000]; Korpad',  $6 \ ^{\circ}$  Ground dweller. Palaearchaearctic distribution known in the Maritime Province, Kuril Islands, Korea and Japan.

*Evarcha albaria* (L. Koch, 1878). Without precise locality, 30 ♂♂♀♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]; Korpad', 4 specimens. Herb-shrub dweller. Palaearchaearctic distribution (Far East Russia, Korea, Japan and China).

*Evarcha arcuata* (Clerck, 1758). Without precise locality, 34 ♂♂♀♀ [Logunov & Koponen, 2000]; Petrova, 1> [Logunov & Marusik, 1999, 2000]; Korpad', 1 ♀. Herbshrub dweller. Transpalaearctic range.

*Evarcha proszynskii* Marusik et Logunov, 1998. Without precise locality, Kiyevka, 12 ♂♂♀ [Marusik & Logunov, 1998]; Gorelaya Sopka Mt., 2 ♂♀ [Logunov & Marusik, 1999, 2000]; Korpad', 1 ♀ Herb-shrub dweller. East Palaearctic – West Nearctic range.

*Heliophanus lineiventris* Simon, 1868. Without precise locality, 19 ♂♂♀♀ [Logunov & Koponen, 2000]; Lazo, Petrova, 2 ♂♂ [Logunov & Marusik, 1999, 2000]; Korpad', 2 ♂♀. Grass dweller. Transpalaearctic range.

*Heliophanus ussuricus* Kulczyński, 1895. Without precise locality, 21 ♂♂♀♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]. Grass dweller. East Palaearctic distribution (from Novosibirsk Area to Kuril Islands.

*Marpissa (Marpissa) milleri* (Peckham & Peckham, 1894). Without precise locality, 16 ♂♀♀ [Logunov, 1999; Logunov & Marusik, 2000]. Grass dweller. Palaearchaearctic distribution (from Cisamuria to Kuril Islands, south to Japan and Korea).

*Marpissa (Marpissa) pomatia* (Walckenaer, 1802). Without precise locality, 9 ♂♂♀♀ [Logunov, 1999; Logunov & Marusik, 2000]. Grass dweller. Transpalaearctic range.

*Mendosa canestrini* (Ninni, 1868). Without precise locality, 2 ♂♂ [Logunov, 1999]. Grass dweller. Transpalaearctic range.

*Mendosa nobilis* (Grube, 1861). Without precise locality, 7 ♂ ♀♀ [Logunov, 1999; Logunov & Marusik, 2000]; Korpad', 9 ♂ ♂♀♀. Grass dweller. Palaearchaearctic distribution known from Cisamuria to Maritime Province. It occurs also in northwestern China.

*Myrmarachne formicaria* (De Geer, 1778). Kiyevka, Amerika, Petrova, 7 ♂ ♀♀ [Oliger, 1984]; without precise locality, 9 ♂ ♀♀ [Logunov & Koponen, 2000]; Amerika, Lazo, 3 ♂ ♂ [Logunov & Marusik, 1999, 2000]; Korpad', 4 ♂ ♂ ♀♀. Ground dweller. Palaearcticwith disjunct distribution between Caucasus and Far East.

*Myrmarachne lugubris* (Kulczyński, 1895). Valunovka [sub *M. inermichelis*, Oliger, 1984], without precise lo-

cality, 2 ♀♀ [Logunov & Koponen, 2000]; Korpad', 4 ♂♂ 2 juv. [Oliger, 1984; Logunov & Koponen, 2000]. Tree dweller. Palaearchaearctic distribution known in Amur Area, Khabarovsk and Maritime provinces, Korea, Japan and China.

*Neon reticulatus* (Blackwall, 1835). Sukhoi Klyuch, 2 ♀♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]; Korpad', 5 ♂ ♀♀. Litter dweller. Trans-Palaearctic – West Nearctic range.

**Phintella castriesiana** (Grube, 1861). Without precise locality, 64 ♂♂♀♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]. Shrub-grass dweller. Palaearctic with disjunct distribution between Caucasus and Far East.

**Phintella parva** (Wesołowska, 1981). Without precise locality, 6 ♂ ♂♀♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]. Grass dweller. Palaearchaearctic distribution known from Cisamuria and Khabarovsk Province to South Korea and Beijing.

*Phintella popovi* (Prószyński, 1979). Without precise locality, 15 ♂♂♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]; Korpad', 7 ♂♂♀. Grass dweller. East Asian distribution (from Transbaikalia to Sakhalin, south to Korea and northwestern China).

*Phlegra fasciata* (Hahn, 1826). Without precise locality, 2 ♂♂ [Logunov & Koponen, 2000]; Gorelaya Sopka Mt., 1 ♂ [Logunov & Marusik, 1999, 2000]. Ground dweller. Transpalaearctic range.

Plexippoides regius Wesołowska, 1981. Without precise locality, 6 ♂ ♀♀ [Logunov & Koponen, 2000]; Korpad', 1 ♀ [Logunov & Koponen, 2000]. Palaearchaearctic distribution known from Khabarovsk and Maritime provinces, Korea and eastern China.

**Pseudicius vulpes (Grube, 1861).** Without precise locality, 16 ♂ ♀ [Logunov & Koponen, 2000]; Amerika, 1 ♀ [Logunov & Marusik, 1999, 2000]. Ground-grass dweller. East Asian distribution known from Cisbaikalia to south Kuril Islands, south to Korea and southern China.

Pseudoeuophrys iwatensis (Bohdanowicz et Prószyński, 1987). Without precise locality, 2 ♀♀ [Logunov & Koponen, 2000]; Amerika, 3 ♂♂ [Logunov & Marusik, 1999, 2000]; Gorelaya Sopka Mt., Korpad', 7 ♂ ♀♀. Litter dweller. Palaearchaearctic range. Known from Khabarovsk and Maritime provinces, Sakhalin, Kuril Islands, Japan, Korea and northwestern China.

Rhene atrata (Karsch, 1881). Without precise locality, 2 ♀♀ [Logunov & Koponen, 2000; Logunov & Marusik, 2000]. Grass dweller? Palaearchaearctic range. Known from the Maritime Province, Japan, Korea and China.

Sitticus albolineatus (Kulczyński, 1895). Without precise locality, 6 ♂ ♂♀♀ [Logunov & Koponen, 2000]; Kiyev-ka, 12 ♂ ♂♀♀ (Logunov, 1998); Amerika, 1 ♀ [Logunov & Marusik, 1999, 2000]; Korpad', 6 ♂ ♂♀♀. Petrophilous spiders, occurs on riverside pebbles. East Palaearctic distribution known from Tuva to Kolyma River and south to Korea.

*Sitticus distinguendus* (Simon, 1868). Without precise locality [sub *S. àvocator*, Logunov, 1998], Amerika,  $1 \ ^{\circ}$  [Logunov & Marusik, 1999, 2000], Korpad',  $2 \ ^{\circ}$   $^{\circ}$  Ground dweller. Transpalaearctic range.

Sitticus fasciger (Simon, 1880). Kiyevka, Korpad', 2 ♀♀ [Logunov, 1998a; Logunov & Marusik, 2000]. East Asian – East Nearctic with disjunct distribution in West Nearctic.

Synagelides agoriformis Strand in Bösenberg et Strand, 1906. Without precise locality, 1 ♀ [Logunov & Koponen, 2000; Logunov, Marusik, 2000]. Litter dweller. Palaearchaearctic range. Known from the Maritime Province, South Kuril Islands, Japan, Korea and northwestern China.

Synagelides zhilcovae Prószyński, 1979. Without precise locality, 4 ♂♂♀♀ [Logunov & Koponen, 2000; Logunov, Marusik, 2000]; Korpad', 3 ♂♂♀♀. Litter dweller. Palaearchaearctic distribution from Khabarovsk Province to South Kuril Islands, south to Japan, Korea and northwestern China.

Yaginumaella medvedevi Prószyński, 1979. Without precise locality, Lazo, 81 ♂♂♀♀ [Logunov & Koponen, 2000]; Petrova, 2 ♂♀ [Koponen & Marusik, 2000]; Korpad', 2 ♀♀. Litter dweller. Palaearchaearctic distribution from Amur Area to Maritime Province, south to Korea and Shanxi.

#### SPARASSIDAE (1)

Globally distributed family with 1038 species in 83 genera [Platnick, 2008]. Only two species of sparassids are known in Russia with one in the Maritime Province.

*Micrommata virescens* (Clerck, 1758). Korpad', 2 ♀♀. Wandering ground-grass dweller. Transpalaearctic range.

#### TETRAGNATHIDAE (5/8)

Relatively large, globally distributed family with 48 genera and 838 species [Platnick, 2008]. Eight genera and 36 species of tetragnathid spiders are known in Russia, of these 28 species occur in Far East. Eight species were found in the reserve; three of those I was unable to identify to species level and one, even to genus level. Occurrence of additional species and one genus (*Diphya*) is very likely.

*Leucauge subgemmea* Bösenberg et Strand, 1906. Korpad', 4 ♀♀ [Marusik & Koponen, 2000]. Orb-weaver, grass-shrub dweller. Palaearchaearctic distribution (Maritime Province, Japan and eastern China).

*Metleucauge yunohamensis* (Bösenberg et Strand, 1906). Korpad', 3 ♂♂♀♀. Orb-weaver, webs are places in shaded places close to water. Palaearchaearctic distribution (south part of the Russian Far East, Japan, Korea and northwestern China).

**Tetragnatha maxillosa Thorell, 1895.** Korpad', 2 ♂♀ [Marusik & Koponen, 2000]. Orb-weaver, grass dweller. Cosmopolitan.

**Tetragnatha nigrita** Lendl, 1886. Without precise locality and dates, ○♀ [Oliger, 1984]. Possibly species was wrongly identified. Orb-weaver, grass dweller. Transpalaearctic range.

*Tetragnatha pinicola* L. Koch, 1870. Korpad',  $\stackrel{\frown}{\circ}$ . Orbweaver, grass dweller. Transpalaearctic range.

### THERIDIIDAE (15/16)

Theridiidae is a fifth largest, globally distributed family with 2288 species in 98 genera [Platnick, 2008]. Around 115 species in 21 genera are known in Russia, of these 90 species and 19 genera are found in Far East. In the reserve 16 species are known so far, one of them was not identified to genus level. Occurrence of additional species and genera (*Episinus*, *Phoroncidia*, *Phycosoma*, and *Rhomphaea*) is very likely.

Chrysso foliata (L. Koch, 1878). No exact locality, 3 ♂♂♀♀. Grass and shrub dweller. Palaearchaearctic range. Known from Maritime Province and South Kuril Islands.

*Enoplognatha abrupta* (Karsch, 1879). Kiyevka,  $\[ \]$  [sub *Teutana transversifoveata* Bos. & Str., Oliger, 1984]. Ground dweller. Palaearchaearctic distribution Most probably this record refers to *E. caricis*, which is very common in Far East.

*Enoplognatha gramineusa* **Zhu, 1998.** Kiyevka, 1 ♂. Ground dweller. East Palaearctic distribution from Almaty Area in Kazakhstan to Maritime Province.

*Enoplognatha margarita* Yaginuma, 1964. Korpad', Lazo, 2 ♀♀. Grass and shrub dweller. East Asian distribution known from Transbaikalia to Japan.

*Enoplognatha serratosignata* (L. Koch, 1879). Prosyolochnyi, 1 ♀ [Marusik & Koponen, 2000]. Ground dweller. Transpalaearctic range.

*Euryopis flavomaculatus* (C.L. Koch, 1836). Prosyolochnyi, 1 ♀. Ground dweller. Transpalaearctic range.

**Parasteatoda tepidariorum (C.L. Koch, 1841).** Korpad', 39 ♂♂♀. Sheet webs are placed among rocks, in buildings, on walls. Cosmopolitan.

**Platnickina sterninotata** (Bösenberg et Strand, 1906). Amerika, 1  $\updownarrow$ . Tree and grass dweller. Palaearchaearctic range.

Robertus ungulatus Vogelsanger, 1944. Petrova, Prosyolochnyi, 2 ヴ♀. Litter dweller. Palaearctic with disjunct distribution between Central Europe and Tuva.

Steatoda bipunctata (Linnaeus, 1758). Korpad', 5 ♂♂♀♀. Tree-trunk dweller. Palaearctic range. Recently introduced to Nearctic.

*Steatoda phalerata* (Panzer, 1801). Amerika, Gorelaya Sopka Mt., 2 ♀♀. Ground dweller. Transpalaearctic range.

Steatoda triangulosa (Walckenaer, 1802). Lazo, 7

*Takayus latifolius* (Yaginuma, 1960). Amerika, Korpad', 4 ♂ ♀♀ [sub *Theridion l.*, Oliger et al., 2002]. Grass dweller. Palaearchaearctic distribution (known in south part of the Russian Far East, Japan, Korea and northwestern China).

*Takayus lunulatus* Guan et Zhu, 1993. Petrova, Amerika, 2 ○ ♀ [sub *Theridion l.*, Oliger et al., 2002]. Grass dweller. Palaearchaearctic distribution (known from Maritime and Liaoning provinces).

Yunohamella subadulta (Bösenberg et Strand, 1906). Korpad', Sukhoi Klyuch, 2 ♂♂ [sub *Theridion s.*, Oliger et al., 2002]. Grass dweller. Palaearchaearctic distribution (Maritime Province, Sakhalin, South Kuril Islands and Japan).

#### THOMISIDAE (20)

Thomisidae is the sixth largest, globally distributed spider family with 2085 species in 173 genera [Platnick, 2008]. About 120 species belonging 16 genera are known to occur in Russia, of these 50 species and 16 genera are known from Far East. In the Lazo Reserve, 19 species were found. Occurrences of additional species of *Ozyptila* and *Xysticus*, as well as additional genera (*Heriaeus, Ebrechtella* and *Tmarus*) are very likely.

**Bassaniana decorata** (Karsch, 1879). Korpad',  $1 \subsetneq 1$  juv. [Marusik & Koponen, 2000]. Tree-trunk dweller. Palaearchaearctic distribution (Maritime Province, Korea, Japan and northeastern China).

*Diaea subdola* (O. Pickard-Cambridge, 1875). Without precise locality and dates, ♀ [sub *Misumenops japonica* (?) Bos. & Str., Oliger, 1984]. Grass and tree dweller. Palaearchaearctic distribution (Maritime Province, Sakhalin, South Kuril Islands, Japan, Korea and south to Taiwan).

*Lysiteles coronatus* (**Grube, 1861).** Korpad', Amerika, Prosyolochnyi, 4 ♂♂♀♀. Grass dweller. Palaearchaearctic range.

*Lysiteles maius* **Ono, 1979.** Gorelaya Sopka Mt., 3 ♂♂♀♀. Grass dweller. East Palaearctic disjunct distribution (northern India, Altai and Palaearchaearctic).

Misumena vatia (Clerck, 1758). Korpad', 2 ♀♀. Grass and shrub dweller. Holarctic range.

*Oxytate striatipes* L. Koch, 1878. Korpad', 2 ♀♀. Tree dweller. Palaearchaearctic range.

*Ozyptila scabricula* (Westring, 1851). Korpad', 2 ♂♂, 6–9.08.1998 S.Koponen. Ground dweller. Transpalaearctic range. This species is new to the fauna of Far East Russia.

**Ozyptila utotchkini** Marusik, 1990. Korpad', 9 ♂♂♀♀ [Marusik & Omelko, 2008]. Litter dweller. Palaearchaearctic distribution (known from Maritime Province, northwestern China and seems occur in Korea).

*Pistius undulatus* Karsch, 1879. Without precise locality and dates, ♂ [sub *P. truncatus*, Oliger, 1984], Korpad', 1 juv. Tree dweller. Asian distribution (from Ural to South Kuril Islands, south to Japan and central China).

*Synema globosum* (Fabricius, 1775). Korpad', ♂♀. Grass dweller. Transpalaearctic range.

*Xysticus* ? *sicus* Fox, 1937. Lazo,  $1 \supseteq [Marusik \& Koponen, 2000]$ . Ground dweller. Palaearchaearctic range. Known from Maritime Province and China (from Tibet to Shanxi). There is a distinct possibility that the population from Maritime Province belongs to a separate species.

*Xysticus* cf. *sibiricus* Kulczyński, 1908. Gorelaya Sopka Mt.,  $7 \stackrel{\frown}{\hookrightarrow}$ . Most probably it is a species new to science.

*Xysticus concretus* **Utotchkin, 1968.** Without precise locality and dates, ○<sup>↑</sup>♀ [Oliger, 1984]. Palaearchaearctic range. Known from the Russian far East (south part), Korea, Japan and Jilin Province of China.

*Xysticus dzungaricus* **Tyshchenko, 1965.** Without precise locality and dates, ♀ [sub *X. kirirchenkoi* Utotchkin, 1968, Oliger, 1984]. Asian distribution (from Tajikistan to Maritime Province).

*Xysticus emerioni* Keyserling, 1880. Without precise locality and dates, ♂ [sub *X. excellens* Kulczyński, 1885, Oliger, 1984]. Ground dweller. East Palaearctic – Nearctic range. Occurrence of this species in Slovakia requires confirmation.

*Xysticus ephippiatus* Simon, 1880. Without precise locality and dates, ♂ [sub *X. transsibiricus* Utotchkin, 1968, Oliger, 1984]; Korpad', Amerika, Gorelaya Sopka Mt., 7 ♂♂♀♀. Grass and litter dweller. Asian distribution (from Tashkent to South Kuril Islands).

**Xysticus lepnevae Utotchkin, 1968.** Gorelaya Sopka Mt., 5 ♂♂♀♀. Palaearchaearctic distribution known from the Russian Far East only (Khabarovsk and Maritime provinces and South Sakhalin).

*Xysticus seserlig* Logunov et Marusik, 1994. Lazo, 2 ♂♂ [Marusik & Koponen, 2000]. Ground dweller. East Palaearctic distribution (from Tuva to Maritime Province).

*Xysticus soldatovi* **Utotchkin, 1968.** Korpad', 1 ♀. Ground dweller. Palaearchaearctic distribution known from Khabarovsk and Maritime Provinces, Inner Mongolia and Jilin.

**Xysticus** sp. Amerika,  $2 \circ ^{2} \varphi$ . Ground dweller; belongs to a new species.

#### TITANOECIDAE (1)

Small family with 5 genera and 46 species [Platnick, 2008] distributed in Holarctic and Neotropics.

Table 1. Species diversity and value of Palaearchaearctic species in Lazo and Bolshekhekhtsyrski Reserves Табл. 1. Видовое разнообразие и доля палеархеарктических видов в Лазовском и Большехехцирском заповедниках.

	I	% of Palae-archearctic	Bolshekhekhtsyrski	% of Palaearchearctic
	Lazo	species	Reserve	species
Agelenidae	8	62	4	50
Anyphaenidae	1	100		
Araneidae	19	58	25	52
Atypidae	1	100		
Cheiracanthiidae	1	0	1	0
Clubionidae	24	83	21	71
Corinnidae	4	50	2	67
Ctenidae	1	100	6	
Cybaeidae	7	100		
Dictynidae	4	50	6	33
Eresidae	1	100		
Gnaphosidae	22	32	13	31
Hahniidae	4	50	3	33
Leptonetidae	1	100		
Linyphiidae	36/41*	51	108	34
Liocranidae	2	100	2	0
Lycosidae	20/23*	65	17	23
Mimetidae	1	100	2	
Mysmenidae			1	100
Nesticidae	1	100	1	100
Oxyopidae	1	0	1	0
Philodromidae	4	55	13	23
Pholcidae	3	67	1	100
Pisauridae	2	50	1	
Salticidae	32	41	39	49
Sparassidae	1	0	1	0
Tetragnathidae	5/8*	63	13	61
Theridiidae	15/16*	63	22	36
Thomisidae	20	53	25	40
Titanoecidae	1	100		
Uloboridae	1	0	1	0
Zoridae	1	0	1	0
Zygiellidae			1	0
Total	244/256*	53	326	41

<sup>\*</sup> listed species/including unidentified and unlisted species

Two genera and 13 species of titanoecids are known in Russia. Of these, two species and two genera are reported from the Russian Far East.

Nurscia albofasciata (Strand, 1907). Korpad', 46 ♂ ~~~ Ground dweller. Palaearchaearctic range.

## ULOBORIDAE (1)

Small globally distributed family with 265 species in 18 genera [Platnick, 2008]. Only five species and three genera of uloborid spiders and known in Russia, of these two species from two genera occur in Far East. So far only one species was found in the reserve, but there are no doubts that the second species, *Uloborus walckenaerius* Latreille, 1806, will be also found here.

*Octonoba yesoensis* (S. Saito, 1934). Korpad', 1 ♀. Shrub dwelling spider. East Palaearctic with disjunct distribution. It is known from Caucasus and Palaearchaearctic.

#### ZORIDAE (1)

Small globally distributed family with 74 species in 13 genera [Platnick, 2008]. Seven species of *Zora* are known in Russia, of these only two species were reported from Maritime Province.

**Zora spinimana** (Sundevall, 1833) (?). Korpad', Amerika,  $3 \stackrel{\frown}{\hookrightarrow} \stackrel{\frown}{\circ}$ . Ground dweller

#### Conclusions

Altogether the present check list contains 244 species in 31 families. If one counts also unidentified and unlisted species, the total diversity of spiders in the Lazo Reserve reaches 256 species. Is it a large or a small number? Bolshekhekhtsyrski Reserve (environs of Khabarovsk), which is small in size, has 326 species [Marusik et al., 2007]. Comparison of species composition in two reserves indicates inadequate (low) num-

ber of Araneidae, Theridiidae, Tetragnathidae, Salticidae, Thomisidae, and especially Linyphiidae and Philodromidae in Lazo Reserve. Number of linyphiids here is three times smaller than in Bolshekhekhtsyrski Reserve, the number of philodromids differs fourfold. There is no doubt that in the future number of species in the reserve will reach 350 or more.

At least two additional families can be found in the reserve, namely Mysmenidae and Theridiosomatidae. Mysmenidae are known north to Amur River and Middle Sakhalin. Theridiosma epeiroides Bösenberg & Strand, 1906 was found in several districts of Maritime Province, as well as in Sakhalin and Kuril Islands. Occurrence of another family, Oonopidae (Ferchestina storozhenkoi Saaristo & Marusik, 2004) is also very likely. This family was found in environs of Gornotayozhnoye Village (Ussuri District). All mentioned families are represented by minute (1.5–2 mm) species. Occurrence of several other families such as Amaurobiidae (Amaurobius sp.), Argyronetidae (Argyroneta aquatica (Clerck, 1758)) and Zygiellidae (Parazygiella dispar (Kulczyński, 1885)) can be found in the reserve. An undescribed *Amaurobius* sp. is known from several localities in Khabarovsk and Maritime Provinces. Argyroneta aquatica is known from several localities in Siberia, China, Japan, Korea and Kuril Islands. Parazygiella dispar is known from many localities in Far East.

There is a relatively small proportion of widely distributed species in the fauna of the reserve. There are five cosmopolitan species and only 13 Circumholarctic species (around 5%). Even if one counts Asian-Nearctic species, the per cent of Holarctic species is very low (9%). The number of Palaearctic species is also rather low, 57 (22%). The number of Asian species (Central Asian – Manchurian or Siberio-Manchurian) is twice lower than that of Transpalaearctic species. The majority of species occurring in the reserve have relatively small ranges. About 130 species (around 52%) have Palaearchaearctic ranges. Some of such species are known from Maritime Province only and few are known only from the reserve (Acantholycosa oligerae, A. sundukovi, Atypus medius, Clubiona eskovi, C. zyuzini, Oculocornia orientalis).

In comparison to Bolshekhekhtsyrski Reserve (the single wellstudied local fauna in the Area), the propotion of Palaearchaearctic species in the fauna of Lazo Reserve is higher (41% and 52% resepectively).

Speaking about spiders of the reserve, it is worth mentioning that there are several species (besides the endemics of the reserve) that were found in Russia only in Lazo Reserve: Araneus yasudai, Ostearius melanopygius and Sernokorba pallidipatellis. Besides described endemic species, there are several more possible undescribed endemics such as Aculepeira cf. matsudae, Arcuphantes, Liocranidae gen. sp., Chorizopes sp., Xysticus cf sibiricus, Xysticus sp.; these species are not known outside of the reserve.

ACKNOWLEDGEMENTS. I wish to thank Yuri N. Sundukov (Lazo Reserve) who contributed large material for

this study and initiated this paper. Seppo Koponen (University of Turku) helped me during my stay in Turku and allowed me to use equipment there including digital camera. Dmitry V. Logunov supplied me with important literature sources. The earlier draft of this paper was kindly checked by Mikhail M. Omelko and Galin N. Azarkina. This work was supported in part by the RFFI grants # 08-04-92230 & 09-04-01365.

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