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New data on the spider fauna of the Polar Urals (Aranei)

Новые данные по фауне пауков (Aranei) Полярного Урала

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КЛЮЧЕВЫЕ СЛОВА: пауки, фауна, Полярный Урал.

ABSTRACT: A review of the spider fauna of the Polar Urals is presented. Based on new samples, the regional list is corrected as well as augmented by 59 species, of which 19 are new to the Urals as a whole, and one new to the fauna of Russia. A complete list of the spider fauna of the region in the strict sense is given (174 species), with the species indicated which have never been recorded in the Polar Urals proper, but encountered only in the adjacent territories of South Yamal, the low flow of Ob River, and the environs of Vorkuta. *Agyneta mossica* (Schikora, 1993), comb. n. ex *Meioneta* Hull, 1920, is new to the Russian fauna.

РЕЗЮМЕ: Дан обзор фауны пауков Полярного Урала. Список пауков региона исправлен и дополнен 59 видами по новым сборам; среди них 19 — новые для Урала в целом, а один вид — новый для фауны России. Приведен полный список пауков Полярного Урала в строгом смысле (174 вида), из него выделены виды, отмеченные лишь из прилегающих территорий Южного Ямала, низовий Оби и окрестностей Воркуты. Вид *Agyneta mossica* (Schikora, 1993), comb.n. ex *Meioneta* Hull, 1920, — новый для фауны России.

Introduction

Although the Ural Mountains can be considered as araneologically probably among the best studied larger regions of Russia, data on the spider fauna of the northern, Polar territories of the Urals are far from complete. Material taken in 1994 by a Finnish-Russian expedition in the Polar Urals, mainly in the Sob River basin, has enriched the regional fauna by 59 species, of which 19 are new to the fauna of the entire Urals, and one to the Russian list.

The spiders of the Urals enjoy a recently published catalogue [Esyunin & Efimik, 1996]. Of a total of 780 spider species encountered in the Urals, 214 have been recorded in the Polar Urals. However, the list presented in that catalogue comprises over 100 species found in the environs of Vorkuta City (Bolshezemelskaya tundra) and in the south of Yamal Peninsula (Khadyta-Yakha and Shchyuchya rivers). These localities, referred to as 1, 3, and 4 on the map given by Esyunin & Efimik [1996: 6], are actually quite remote from the Ural Mountains proper, lying within the zone of lowland southern tundra. Hence, an a priori incorporation of species registered from those places into the general faunal list of the spiders of the Polar Urals appears incorrect. Of the over 100 species concerned, based on new or restudied samples (see below), the presence of 27 forms has been reconfirmed there, while the remaining species must be ejected from the fauna of the Polar Urals proper (marked in Table by a right alignment).

The spider material was collected during a Finnish-Russian expedition to the Polar Urals between 30.VI. and 17.VII.1994. The main collecting localities lay in the Sob River Valley: Krasnyi Kamen and Ra-Is mts. (both 66°55'N, 65°40'E), as well as at Pass Europe-Asia (67°02'N, 65°05'E). A few samples were taken near Ob River in the environs of Oktyabrsky and Labytnangi (66°42'N, 66°35'E). Administratively, all above localities lie in the Tyumen Area, namely its Yamalo-Nenets Autonomous Region.

In the mountainous parts of the Polar Urals, the study habitats lay between 100 and 550 m a.s.l. (up to 1000 m. on Ra-Is Mt.). The sites included both forested and open areas. Forests were formed by *Picea*, *Larix* and *Betula*, at higher elevations also by *Alnus*. Open areas encompassed river banks, near-water and forest meadows, bogs and alpine heaths (= goltsy). Material was collected mainly by S. Ko-

ponen (S.K.), as well as by P.T. Lehtinen (P.L.), M. Uusitalo (M.U.), J. Jalava (J.J.), J. Kullberg (J.K.) (all from Finland), and A. Zinovjev (A.Z.) (Russia). and it is mainly deposited in the Zoological Museum, University of Turku, Finland (ZMT).

A few more samples have been incorporated as well, all in the Zoological Museum of the Moscow State University, i.e. material collected by T.E. Rossolimo (T.R.) from the Sob River Valley (VII–IX.1987), as well as by A.V. Tanasevitch (A.T.) from the Komi Republic on the western macroslope of the Polar Urals, northern extreme of Engane-Pe Mts. Ridge (67°60'N, 65°50'E), Pachruzshor Brook Valley (5–8.VII.1986).

A part of the study area (Krasnyi Kamen and Pass Europe-Asia) roughly correspond to Locality 2 in Esyunin & Efimik [1996: 6, map]. Unfortunately, there are mistakes about it, as Region I on the map given by those authors is Pay-Khoy, not Polar Urals, while Region II is actually Polar Urals, not Cispolar Urals (see a correct map in Esyunin et al. [1995: 51]).

Following abbreviations are used in the text: s.d. – same date, s.l. – same locality.

Corrections to the Polar Urals spider fauna

1. *Agyneta saxatilis* (Blackwall, 1844) [not sensu Blackwall, 1844!] = *Meioneta mossica* Schikora, 1993. A revision of pertinent material has shown that all records of *Agyneta saxatilis* in the Polar Urals [Tanasevitch, 1985; Eskov, 1994] and South Yamal [Eskov, 1988; 1994] are erroneous and actually refer to *Meioneta mossica* Schikora, 1993, a species recently described from central Europe [Schikora, 1993]. This form is indeed very close to *Agyneta saxatilis*, but differs in the presence of only a single tooth on the distal lobe of the paracymbium (vs. two teeth in *A. saxatilis*). *Agyneta mossica* (Schikora, 1993), **comb.n.**, is new to the Russian fauna!

2. *Lepthyphantes pseudoobscurus* Marusik, Hippa et Koponen, 1996 [not sensu Marusik, Hippa et Koponen, 1996!] = *Lepthyphantes obscurus* (Blackwall, 1841). Based on topotypes, the record of *L. pseudoobscurus* (paratype ♂, ZMT, not revised) by Marusik et al. [1996] in the Polar Urals is certainly erroneous and actually refers to *L. obscurus*. In other words, the Polar Urals appear to support only the latter species.

3. *Dicymbium nigrum* (Blackwall, 1834) [not sensu Blackwall, 1834!] = *Dicymbium facetum* (L.Koch, 1879). The record of *D. nigrum* in the Polar Urals by Tanasevitch [1985] is erroneous and actually refers to *D. facetum* (L. Koch, 1879).

4. *Hilaira jamalensis* Eskov, 1981 [not sensu Eskov, 1981] = *Hilaira glacialis* (Thorell, 1872). Kulczyński [1916] reported *H. glacialis* (Thorell, 1872) from the upper reaches of Shchyuchya River and Pay-Khoy (Lyubi-Yakha River). Referring to Kulczyński's [1916] drawing of the epigyne, Eskov [1981] attributed those earlier records to the species *H. jamalensis* Eskov, 1981 he was describing as new. However, the discovery of *H. glacialis* very close to the upper reaches of Shchyuchya River (see below) coupled with the complete identity of pertinent material with Kulczyński's [1916] drawing of *H. glacialis* (as opposed to *H. jamalensis*) allow to regard Eskov's [1981] opinion as a misidentification of *some H. glacialis* under *H. jamalensis*.

5. *Hilaira nivalis* Holm, 1937. This species has never been recorded in the Polar Urals proper. The closest reliable record is in the Yugorsky Peninsula, Belyi Nos [Eskov, 1987].

6. *Pachygnatha clercki* Sundevall, 1823, *Tetragnatha extensa* (Linnaeus, 1758), *Larinioides cornutus* Clerck, 1758 and *Tibellus maritimus* (Menge, 1875), all indicated by Esyunin & Efimik [1996][1], as reported from the montane part of the Polar Urals, have actually been recorded at the "Kharp" Station, environs of Labytnangi supporting a lowland piece of near-Ob tundra [Olshvang, 1977]. The first trio but not *T. maritimus* do occur in the Polar Urals, while *T. maritimus* must be ejected from the regional list.

Records new to the Polar Urals fauna

The list below represents all faunistic records new to the Polar Urals:

Robertus lyrifer Holm, 1939: 1 ♀, Krasnyi Kamen, swampy slope, 3—17.VII.1994, leg. S.K.; 1 ♀, s.l., *Sphagnum* in forest, 6.VII.1994, leg. P.L.; 1 ♀, s.l., alpine bog, 2.VII.1994, leg. M.U.; 3 ♀♀, Europe-Asia Pass, tundra bog, 15.VII.1994, leg. M.U.

Steatoda albomaculata (De Geer, 1778): 2♂♂, 8♀♀, Krasnyi Kamen, sandy river shore, 5.VII.1994, leg. S.K.

Steatoda phalerata (Panzer, 1801): 1 ♀, Sob River Valley, *Betula-Larix-Picea* forest on foot of slope, 20.VIII.1983, leg. A.T.

Agyneta allosubtilis Loksa, 1965: 3♂♂, 4♀♀, Krasnyi Kamen, *Aconitum* grove, 3—17.VII.1994, leg. S.K.; 2♂♂, 3♀♀, s.l., mixed forest, 8—18.VII.1994, leg. S.K.

Bathyphantes gracilis (Blackwall, 1841): 1 ♂, 1 ♀, Krasnyi Kamen, *Aconitum* grove, 3—17.VII.1994, leg. S.K.

Carorita limnaea (Crosby et Bishop, 1927): 3 ♀♀, Krasnyi Kamen, *Sphagnum* in forest, 6.VII.1994, leg. P.L.

Centromerus arcanus (O.Pickard-Cambridge, 1873): 4♂♂, 1 ♀, Sob River Valley, near Sob Railway Station, in pitfall, 8—18.VII.1987, leg. T.R.

Ceratinopsis cf. *romana* (O.Pickard-Cambridge, 1872):, 1♂, 1 ♀, Sob River, Krasnyi Kamen, 200 m, sandy field and stone bed (herbs), 5.VII.1994, leg. P.L. The description of this new for science species is in print now.

Dactylopisthes video (Chamberlin et Ivie, 1947): 3 ♂, 2 ♀♀, Krasnyi Kamen, alpine heath, 530 m, 2—16.VII.1994, leg. S.K.; 1 ♂, Europe-Asia Pass, tundra heath, 4—15.VII.1994, leg. S.K.

Diplocephalus subrostratus (O.Pickard-Cambridge, 1873): 1 ♂, Krasnyi Kamen, shore meadow, 3—17.VII.1994, leg. S.K.; 5 ♂♂, 4 ♀♀, s.l., *Aconitum* grove, s.d., leg. S.K.; 3 ♂♂, 2 ♀♀, s.l., mixed forest 8—18.VII.1994, leg. S.K.; 1♀, s.l., litter in slope forest, 17.VII.1994, leg. M.U.

Erigone atra (Blackwall, 1841): 5 ♂♂, 1 ♀, Krasnyi Kamen, shore meadow, 3—17.VII.1994, leg. S.K.; 1 ♂, s.l., moist tundra, 480 m, 2—16.VII.1994, leg. S.K.

Erigone hypoarctica Eskov, 1989: 1♂, Sob River Valley, bank on Sob River, under stones, 10.VII.1982, leg. A.T.

Erigone remota L.Koch, 1869: 1 ♂, Sob River Valley, north slope of Ra-Is, in house, 10.VII.82 leg. A.T.) (as *E. longipalpis* in Tanasevitch, 1985, partly).

Gonatium rubellum (Blackwall, 1841): 1 ♂, 1 ♀, Krasnyi Kamen, *Aconitum* grove, 3—17.VII.1994, leg. S.K.; 1 ♀, s.l., mixed forest, 8—18.VII.1994, leg. S.K.; 1 ♀, s.l., forestline, 380 m, 2—16.VII.1994, leg. S.K.

Hilaira frigida (Thorell, 1872): 1 ♀, Krasnyi Kamen, rotten *Larix*, 1.VII.1994, leg. M.U.

[1] The remaining species recorded at Kharp are the result of misidentifications (s. Esyunin & Efimik [1996]).

Hilaira pervicax Hull, 1908: 1♀, Krasnyi Kamen, forest litter, 1.VII.1994, leg. M.U.

Hybauchenidium ferrumequinum (Grube, 1861): 1♀, Krasnyi Kamen, heath, 1—16.VII.1994, leg. S.K.; 2♀♀, s.l., *Salix* thickets, 1.VII.1994, leg. P.L.

Hypomma bituberculatum (Wider, 1834): 1 ♀, Krasnyi Kamen, mixed forest, 5.VII.1994, leg. P.L.

Hypselistes jacksoni (O.Pickard-Cambridge, 1902): 1♀, Krasnyi Kamen, mixed forest, 5.VII.1994, leg. P.L.; 1♀, s.l., forestline, 380 m, 2—16.VII.1994, leg. S.K.; 1♀, Europe-Asia Pass, tundra heath, 3.VII.1994, leg. S.K.; 1 ♀, same locality, tundra heath, 15.VII.1994, leg. A.Z.

Lasiargus hirsutus (Menge, 1869): 2 ♂♂, 2 ♀♀, Krasnyi Kamen, *Larix* forest, 280 m, 2—16.VII.1994, leg. S.K.

Lophomma cognatum Holm, 1960: 1♀, Krasnyi Kamen, bog, 1—16.VII.1994, leg. S.K.; 1♀, s.l., *Sphagnum* in forest, 6.VII.1994, leg. P.L.

Mecynargus sphagnicola (Holm, 1939): 1♂, Krasnyi Kamen, bog, 1—16.VII.1994, leg. S.K.; 1 ♂, s.l., forest meadow, 8—18.VII.1994, leg. S.K.; 2♀♀, s.l., forestline, 380 m, 2—16.VII.1994, leg. S.K.

Pelecopsis parallela (Wider, 1834): 2♀♀, west macroslope of Polar Ural, 65°50′ N, 67°55′E, around valley of Pachruzshor brook, Under goltsy belt, mountain tundra, moss near spring 5—8.VIII.1986, leg. A.T.

Poeciloneta theridiformis (Emerton, 1911): 1 ♀, Krasnyi Kamen, mixed forest, 5.VII.1994, leg. P.L.

Porrhomma pallidum Jackson, 1913: 2♂♂, Krasnyi Kamen, mixed forest, 8—18.VII.1994, leg. S.K.; 1♂, s.l., forestline, 380 m, 2—16.VII.1994, leg. S.K.; 1♂, 1♀, s.l., forest slope, 17.VII.1994, leg. M.U.; 1♂, 2♀♀, s.l., forest slope, 16.VII.1994, leg. M.U.

Semljicola alticola (Holm, 1950): 2 ♀♀, Krasnyi Kamen, 3.VII.1994, leg. M.U.

Silometopus sibiricus Eskov, 1989: 1♂, 1♀, Krasnyi Kamen, swampy slope, 3—17.VII.1994, leg. S.K.

Tenuiphantes mengei (Kulczyński, 1887): 1 ♀, Sob railway station, mountain tundra, 8—18.VII.1987. , leg. T.R.

Thaleria orientalis Tanasevitch, 1984: 1♀, Europe-Asia Pass, tundra heath, 15.VII.94, leg. S.K.; 1♀, s.l., tundra litter, 15.VII.1994, leg. M.U.

Walckenaeria nodosa O.Pickard-Cambridge, 1873: 1♀, Krasnyi Kamen, forest litter, 1.VII.1994, leg. M.U.

Walckenaeria unicornis O.Pickard-Cambridge, 1861: 5 ♀♀, Krasnyi Kamen, shore meadow, 3—17.VII.1994, leg. S.K.

Aculepeira packardi (Thorell, 1875): 1 ♀, Europe-Asia Pass, tundra heath, 19.VII.1994, leg. S.K.

Araneus alsine (Walckenaer, 1802): 1 ♂, Krasnyi Kamen, swampy slope, 3—17.VII.1994, leg. S.K.

Araneus quadratus Clerck, 1758: 1♂, 1♀, Krasnyi Kamen, slope forest, 6.VII.1994, leg. J.J.

Hypsosinga albovittata (Westring, 1851): 1♂, 1♀, Krasnyi Kamen, bog, 1—16.VII.1994, leg. S.K.

Hypsosinga pygmaea (Sundevall, 1831): 1♀, Krasnyi Kamen, bog, 1—16.VII.1994, leg. S.K.

Pardosa agricola (Thorell, 1856): 14 ♂♂, 3 ♀♀, Krasnyi Kamen, shore meadow, 3—17.VII.1994, leg. S.K.

Pardosa atrata (Thorell, 1873): 5♂♂, 5♀♀, Krasnyi Kamen, swampy slope, 3—17.VII.1994, leg. S.K.; 1♀, s.l., shore meadow, s.d., leg. S.K.

Pardosa plumipes (Thorell, 1875): 4 ♀♀, Krasnyi Kamen, 1.VII.1994, leg. S.K.

Pardosa tesquorum (Odenvall, 1901): 3 ♂♂, 8 ♀♀, Krasnyi Kamen, river shore, 1—5.VII.1994, leg. S.K.; 4♀♀, s.l., 5.VII.1994, leg. J.K.; 3 ♀♀, s.l., alpine zone, 17.VII.1994, leg. S.K.

Arctella lapponica (Holm, 1945): 1 ♂, 3 ♀♀, Sob railway station, 8—18.VII.1987, leg. T.R.

Argenna prominula Tullgren, 1948: 1 ♂, 5 ♀♀, Krasnyi Kamen, 1—3.VII.1994, leg. M.U.

Dictyna tyshchenkoi Marusik, 1988: 1 ♂, Krasnyi Kamen, alpine heath, 530 m, 2—16.VII.1994, leg. S.K.

Arctobius agelenoides (Emerton, 1919): 1♀, Krasnyi Kamen, mixed forest, 8—18.VII.1994, leg. S.K.; 1 ♀, s.l., forest slope, 17.VII.1994, leg. M.U.

Clubiona norvegica Strand, 1900: 1 ♂, Krasnyi Kamen, *Sphagnum* in forest, 6.VII.1994, leg. P.L.

Clubiona trivialis C.L.Koch, 1843: 3 ♂♂, Europe-Asia Pass, tundra heath, 4—15.VII.1994, leg. S.K.

Gnaphosa sticta Kulczynski, 1908: 3♀♀, Krasnyi Kamen, *Larix* forest, 280 m, 2—16.VII.1994, leg. S.K.; 1♀, s.l., mixed forest, 8—18.VII.1994, leg. S.K.

Haplodrassus hiemalis (Emerton, 1909): 1♂, Krasnyi Kamen, swampy slope, 3—17.VII.1994, leg. S.K.; 1 ♂, s.l., forest, 2—16.VII.1994, leg. S.K.

Micaria alpina L.Koch, 1872: 1 ♂, 1 ♀, Sob railway station, tundra, 8—18.VII.87, leg. T.R.

Philodromus cf. *alascensis* Keyserling, 1884: 1♀, Europe-Asia Pass, tundra heath, 1f, 19.VII.1994, leg. J.K.; s.l., tundra, 19.VII.1994, leg. S.K.

Thanatus bungei (Kulczyński, 1908): 3 ♀♀, Krasnyi Kamen, under stones, 2.VII.1994, leg. P.L.; 1♂, 1♀, s.l., alpine heath, 500 m, 16—17.VII.1994, leg. J.K & M.U.

Thanatus striatus (C.L.Koch, 1845): 3 ♀♀, Krasnyi Kamen, slope meadow, 3—17.VII.1994, leg. S.K.

Ozyptila sincera Kulczyński, 1926: 1 ♀, Krasnyi Kamen, 1.VII.1994, leg. M.U.

Xysticus albidus Grese, 1909: 1 ♂, Krasnyi Kamen, moist tundra, 480 m, 2—16.VII.1994, leg. S.K.; 1 ♂, 2 ♀♀, s.l., alpine heath, 530 m, s.d., leg. S.K.; 1 ♂, s.l., alpine zone, 2.VII.1994, leg. S.K.; 1♀, Europe-Asia Pass, tundra heath, 4.—15.VII.1994, leg. S.K.

Xysticus audax (Schrank, 1803): 1♀, Krasnyi Kamen, sweep netting, 5.VII.1994, leg. S.K.

Xysticus obscurus Collett, 1977: 1 ♂, Krasnyi Kamen, forest meadow, 8—18.VII.1994, leg. S.K.; 1 ♂, s.l., *Larix* forest, 280 m, 2—16.VII.1994, leg. S.K.; 2 ♂♂, 2 ♀♀, Sob railway station, 8—18.VII.1987, leg. T.R.

Dendryphantes czekanowskii Prószyński, 1979: 1 ♂, Krasnyi Kamen, alpine zone, 17.VII.1994, leg. S.K.

Heliophanus dampfi Schenkel, 1923: 1 ♂, Krasnyi Kamen, sweep netting, 5.VII.1994, leg. S.K.

Records new to the Sob River Basin fauna

The list below presents all faunistic records new to the Sob River Basin:

Incestophantes incestus (L.Koch, 1879): 1♀, Krasnyi Kamen, Ra-Is Mt., alpinezone, 6.VII.1994, leg. S.K.

Acantholycosa norvegica (Thorell, 1872): 1 ♂, Krasnyi Kamen, alpine heath, 530 m, 2—16.VII.1994, leg. S.K.; 1♂, 2♀♀ s.l., alpine heath, 530 m, 6.VII.1994, leg. J.J; 1♀, s.l., *Larix* forest, 280 m, 2—16.VII.1994, leg. S.K.; 1♂, s.l., forestline, 380 m, s.d., leg. S.K.; 3♂♂, 4♀♀, s.l., slope, 6.VII.1994, leg. S.K.; 1♂, Sob River Valley, under stones on bank of Sob River, 10.VII.82, leg. A. T.; 1♀, s.l., *Larix-Picea* forest on slope, 5.VII.1981, leg. A. T.

Alopecosa solivaga (Kulczyński, 1901): 1 ♂, 1 ♀, Krasnyi Kamen, alpine zone, 2—17.VII.1994, leg. J.K.; 1♂, s.l., Ra-Is Mt., alpine zone, 6.VII.1994, leg. S.K.; 1♀, s.l., under stone in alpine zone, 18.VII.1994, leg. S.K.

Hence the Sob River Basin fauna currently enjoys 161 species, this composing 93% of the entire Polar Urals fauna and thus allowing to regard this faunule as one of the best studied throughout the Urals.

In addition, a short list is given below of the spiders taken from a locality never visited before by spider collectors: western macroslope of Polar Urals, northern extreme of Engane-Pe Mt. Ridge (67°60'N, 65°50'E – latitude of Vorkuta City), environs of Pachruzshor Brook Valley, 5–8.VII. 1986, leg. A.T.:

1. Foot of slope, under stones: 1 ♀, *Alopecosa hirtipes* (Kulczyński, 1908).

2. Low goltsy (= montane tundra) belt, moss near spring: 2 ♂♂, 3 ♀♀, *Hilaira leviceps* (L.Koch, 1879); 2 ♀♀, *Walckenaeria korobeinikovi* Esyunin et Efimik, 1996; 1 ♀, *Hilaira herniosa* (Thorell, 1875); 1 ♂, 1 ♀, *Minicia uralensis* Tanasevitch, 1983; 2 ♂♂, *Mecynargus monticola* (Holm, 1943); 1 m, *Pelecopsis mengei* (Simon, 1884); 2 ♀♀, *Pelecopsis parallela* (Wider, 1834); 1 ♀, *Typhochrestus latithorax* (Strand, 1907); 1 ♀, *Entelecara erythropus* (Westring, 1851); 1 ♂, 1 ♀, *Pardosa indecora* L.Koch, 1879.

3. Goltsy belt, under stones: 5 ♂♂, 4 ♀♀, *Hilaira leviceps* (L.Koch, 1879); 3 ♀♀, *Entelecara erythropus* (Westring, 1851); 1 ♀, *Minicia uralensis* Tanasevitch, 1983; 1 ♀, *Wubanoides uralensis* (Pakhorukov, 1981); 1 ♀, *Hilaira glacialis* (Thorell, 1872); 1 ♀, *Oreonetides vaginatus* (Thorell, 1872), 1 ♀, *Thymoites oleatus* (L.Koch, 1879), 1 ♂, *Xysticus britcheri* Gertsch, 1934.

Some new records from the low flow of Ob River

A few samples derive from near Ob River (environs of Labytnangi and Oktyabrsky). These species cannot be included in the spider fauna of the Polar Urals proper, but below we provide the records as interesting enough:

Steatoda phalerata (Panzer, 1801): 1 ♀, environs of Labytnangi, 9—19.VII.1987, leg. T.R.

Agyneta olivacea (Emerton, 1882): 1 ♂, 1 ♀, Labytnangi, moist *Larix* forest, 30.VI—10.VII.1994, leg. S.K.

Bathyphantes gracilis (Blackwall, 1841): 1♂, 1♀, Oktyabrsky, river shore debris, 12—13.VII.1994, leg. S.K.

Collinsia dentata Eskov, 1990: 2 ♀♀, Oktyabrsky, river shore, 12.VII.1994, leg. S.K.

Diplocephalus subrostratus (O.Pickard-Cambridge, 1873): 1♀, Oktyabrsky, leaf litter, 12.VII.1994, leg. M.U.

Drepanotylus uncatus (O.Pickard-Cambridge, 1873): 1 ♂, Oktyabrsky, river shore debris, 12—13.VII.1994, leg. S.K.

Erigone atra (Blackwall, 1841): 2 ♂♂, Oktyabrsky, shore litter, 12—13.VII.1994, leg. S.K.

Hypomma bituberculatum (Wider, 1834): 1 ♀, Oktyabrsky, sweeping field layer, 12.VII.1994, leg. S.K.

Oedothorax apicatus (Blackwall, 1850): 1♂, 15♀♀, Oktyabrsky, river shore, 12.VII.1994, leg. S.K.

Savignya frontata Blackwall, 1833: 1♂, 1♀, Oktyabrsky, river shore debris, 12.—13.VII.1994, leg. S.K.; 1 ♂, 17 ♀♀, Oktyabrsky, river shore, 12.VII.1994, leg. S.K.

Thaleria orientalis Tanasevitch, 1984: 1 ♀, Oktyabrsky, herbrich forest, 12.VII.1994, leg. M.U.

Araneus quadratus Clerck, 1758: 1 ♂, Oktyabrsky, forest tundra, 13.VII.1994, leg. S.K.

Pardosa atrata (Thorell, 1873): 1♂, 3♀♀, Oktyabrsky, sandy shore, 12—13.VII.1994, leg. S.K.

Philodromus cespitum (Walckenaer, 1802): 1 ♂, Labytnangi, 11.VII.1994, leg. S.K.

Philodromus histrio (Latreille, 1819): 1 ♀, Oktyabrsky, forest tundra, 13.VII.1994, leg. S.K.

Misumena vatia (Clerck, 1758): 1 ♀, Oktyabrsky, forest tundra, 13.VII.1994, leg. S.K.

Ozyptila sincera Kulczyński, 1926: 3 ♀♀, Oktyabrsky, forest, 12—14.VII.1994, leg. S.K & M.U.

A few unidentified species from two genera new to the Polar Urals and Ob River have been found as well:

Zora sp.: 1♂, Krasnyi Kamen, heath, 1—16.VII.1994, leg. S.K.; 3 ♂♂, s.l., *Larix* forest, 280 m, 2—16.VII.1994, leg. S.K.; 1 ♀, s.l., forest slope, 2.VII.1994, leg. M.U; 1 ♂, Labytnangi, moist *Larix* forest, 30.VI—10.VII.1994, leg. S.K.

Pirata sp.: 1 ♀, Oktyabrsky, river shore, 12.VII.94 S.K.

A check-list of the Polar Urals spider fauna

Below is a complete list of the spiders encountered in the Polar Urals and adjacent parts. We have revised the localities of all species reported from the Polar Urals, so we separate the species known from the Polar Urals proper (in Table with a left alignment) from those recorded in the adjacent parts only: Kara River, Vorkuta City, South Yamal (Sobkei = Ssobkaj = Sobkai = Sopkai, low flow of Shchyuchya River, Khadyta-Yakha River, etc.), as well as from the low flow of Ob River and/or incorporated in the regional fauna without pertinent samples (in Table, all with a right alignment).

Column The Polar Urals Mts.: A full list of the regional spider fauna: * — species recorded in the Polar Urals for the first time (for exact localities, see text); ** — species new to the Urals as a whole.

Column Sob River Basin: The local fauna of the Sob River Basin: Sob Railway Station, Sob River Valley (Polar Urals part), Pass Europe-Asia, Krasnyi Kamen and Ra-Is mts.: * — species recorded in the Sob River Basin for the first time.

Column Ob River: Environs of Labytnangi, Oktyabrsky, and several localities in Kulczyński [1916]: * — species recorded in the low flow of Ob River for the first time.

Column South Yamal (sensu Esyunin & Efimik [1996], with corrections): Khadyta-Yakha & Shchyuchya rivers[2] (middle and low flows), Sobkei and several localities in Kulczyński [1916].

Column Vorkuta (sensu Esyunin & Efimik [1996], with corrections): species from the environs of Vorkuta City.

Abbreviations in capital letters refer to the authors who have recorded these or those species: K — Kulczyński [1916], T — Tanasevitch [1985], O — Ovtsharenko [1982], Ol — Olshvang [1977], E&E — Esyunin & Efimik [1996], M — Marusik et al. [1996].

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References

Eskov K.Yu. 1981. [Taxonomy of spiders of the genus *Hilaira* (Aranei, Linyphiidae)] // Zool. zhurn. T.60. No.10. P.1486-1493 [in Russian, with English summary].

[2] Note that Shchyuchya River in Kulczynski [1916] actually refers to the river's upper flow mainly, i.e. lying in the Polar Urals.

Table. A check-list of the Polar Urals spider fauna

Family, Species		Polar Urals Mts.		Environs of the Polar Urals Mts.		
Polar Urals	**Beyond from Polar Urals fauna**	Polar Urals Mts.	Sob River Basin	Ob River	South Yamal	Vorkuta
Theridiidae						
	Robertus arundineti (O.Pickard-Cambridge, 1871)				+	
Robertus lividus (Blackwall, 1836)		T	T	K		
Robertus lyrifer Holm, 1939		*	*		+	
Steatoda albomaculata (De Geer, 1778)		*	*			
Steatoda phalerata (Panzer, 1801)		*	*	*		
Thymoites oleatus (L.Koch, 1879)		K, T	K, T		+	
Linyphiidae						
Agnyphantes expunctus (O.Pickard-Cambridge, 1875)		T	T		+	
Agyneta allosubtilis Loksa, 1965		**	*		+	
A. birulai (Kulczynski, 1908)		T	T			
A. brusnewi (Kulczynski, 1908)		T	T			
A. gulosa (L.Koch, 1869)		T	T			
	A. levii Tanasevitch, 1984				+	
	A. olivacea (Emerton, 1882)			*		+
	A. pseudosaxatilis Tanasevitch, 1984				+	
A. ripariensis Tanasevitch, 1984		T	T			+
	A. rurestris (C.L.Koch, 1836)				+	
A. mossica (Schikora, 1993)		T	T		+	
A. similis (Kulczynski, 1926)		T	T			
	A. subtilis (O.Pickard-Cambridge, 1863)				+	
	A. tenera (Menge, 1866)				+	
Allomengea scopigera (Grube, 1859)		T	T		+	
Araeoncus vorkutensis Tanasevitch, 1984		T	T			+
	Asthenargus paganus (Simon, 1884)				+	
	Baryphyma gowerense (Locket, 1965)				+	
Bathyphantes gracilis (Blackwall, 1841)		*	*			
B. humilis (L.Koch, 1879)		K			+	
B. reprobus (Kulczynski, 1916)		K			+	
	B. setiger F.O.Pickard-Cambridge, 1894				+	
B. simillimus (L.Koch, 1879)		T	T		+	
Bolephthyphantes index (Thorell, 1856)		T	T		+	
Bolyphantes luteolus (Blackwall, 1833)		T	T			
Carorita limnaea (Crosby et Bishop, 1927)		*	*		+	
Centromerus arcanus (O.Pickard-Cambridge, 1873)		*	*			
C. clarus (L.Koch, 1879)		T	T			
Ceratinopsis cf. romana (O.Pickard-Cambridge, 1872)		*	*			
Cnephalocotes obscurus (Blackwall, 1834)		T	T			
	Collinsia dentata Eskov, 1990			**		
C. distincta (Simon, 1884)		T	T			
	C. holmgreni (Thorell, 1872)				+	
	C. spetsbergensis (Thorell, 1872)				+	+

Table (continuation).

Family, Species	Polar Urals Mts.		Environs of the Polar Urals Mts.		
Polar Urals **Beyond from Polar Urals fauna**	Polar Urals Mts.	Sob River Basin	Ob River	South Yamal	Vorkuta
Dactylopisthes video (Chamberlin et Ivie, 1947)	*	*		+	+
Decipiphantes decipiens (L.Koch, 1879)	T	T		+	
Dicymbium facetum (L.Koch, 1879)	T	T		+	
Diplocentria bidentata (Emerton, 1882)	T	T		+	+
Diplocephalus subrostratus (O.Pickard-Cambridge, 1873)	*	*		+	
Dismodicus bifrons (Blackwall, 1841)				+	
Drepanotylus borealis Holm, 1945				+	
D. uncatus (O.Pickard-Cambridge, 1873)			**		
Entelecara erythropus (Westring, 1851)	T	T			
Erigone arctica sibirica Kulczynski, 1908	K			+	
E. atra (Blackwall, 1841)	*	*		+	
E. hypoarctica Eskov, 1989	**	*		+	
E. longipalpis (Sundevall, 1830)	T	T		+	
E. psychrophila Thorell, 1872				+	
E. remota L.Koch, 1869	**	*			
E. svenssoni Holm, 1975				+	
E. tirolensis L.Koch, 1872	K	K			
Flagelliphantes bergstroemi (Schenkel, 1931)	T	T		+	
Gnathonarium taczanowskii (O.Pickard-Cambridge, 1873)	T	T			
Gonatium rubellum (Blackwall, 1841)	*	*			
G. rubens (Blackwall, 1833)	T	T		+	
Hilaira frigida (Thorell, 1872)	**	*			
H. gibbosa Tanasevitch, 1982				+	+
H. glacialis (Thorell, 1872)	K				
H. herniosa (Thorell, 1875)	T	T		+	+
H. incondita (L.Koch, 1879)	K				
H. jamalensis Eskov, 1981				+	
H. leviceps (L.Koch, 1879)	K, T	T		+	
H. nubigena Hull, 1911				+	
H. pervicax Hull, 1908	*	*		+	
H. proletaria (L.Koch, 1879)	K			+	
H. tatrica tatrica Kulczynski, 1915	T	T		+	+
Horcotes strandi (Sytshevskaja, 1935)	T	T		+	
Hybauchenidium aquilonare (L.Koch, 1879)				+	
H. ferrumequinum (Grube, 1861)	**	*		+	
Hypomma bituberculatum (Wider, 1834)	*	*		+	
Hypselistes jacksoni (O.Pickard-Cambridge, 1902)	*	*			
H. semiflavus (L.Koch, 1879)	K			+	
Improphantes complicatus (Emerton, 1882)	T	T		+	
Incestophantes incestus (L.Koch, 1879)	K	*		+	
I. kochiellus (Strand, 1900)	T	T		+	
Islandiana cristata Eskov, 1987				+	
Kaestneria pullata (O.Pickard-Cambridge, 1863)				+	

Table (continuation).

Family, Species	Polar Urals Mts.		Environs of the Polar Urals Mts.		
Polar Urals **Beyond from Polar Urals fauna**	Polar Urals Mts.	Sob River Basin	Ob River	South Yamal	Vorkuta
Kikimora palustris Eskov, 1988				+	
Lasiargus hirsutus (Menge, 1869)	*	*			
"Lepthyphantes" laricetorum Tanasevitch et Eskov, 1987				+	
"L." obscurus (Blackwall, 1841)	M	M		+	
"L." punctulatus Holm, 1939	T	T			
"L." taczanowskii (O.Pickard-Cambridge, 1873)				+	
Leptorhoptrum robustum (Westring, 1851)	T	T		+	+
Lophomma cognatum Holm, 1960	**	*		+	
Macrargus multessimus (O.Pickard-Cambridge, 1875)	T	T		+	
Masikia indistincta (Kulczynski, 1908)				+	
Maso sundevalli (Westring, 1851)				+	
Mecynargus borealis (Jackson, 1930)				+	
M. monticola (Holm, 1943)	T	T		+	+
M. morulus (O.Pickard-Cambridge, 1873)					+
M. paetulus (O.Pickard-Cambridge, 1875)				+	+
M. sphagnicola (Holm, 1939)	*	*		+	+
M. tungusicus (Eskov, 1981)	T	T		+	+
Micrargus herbigradus (Blackwall, 1854)	T	T			
Minicia uralensis Tanasevitch, 1983	T	T			
Minyrioloides trifrons (O.Pickard-Cambridge, 1863)	T	T		+	
Monocerellus montanus Tanasevitch, 1983	T	T			
Notioscopus jamalensis Grese, 1909				+	
Oedothorax apicatus (Blackwall, 1850)			*		
O. retusus (Westring, 1851)				+	
Oreonetides vaginatus (Thorell, 1872)	K, T	T		+	
Oryphantes geminus (Tanasevitch, 1982)	T	T		+	+
Panamomops dybowskii (O.Pickard-Cambridge, 1873)	T	T		+	
Paraglyphesis lasiargoides Eskov, 1991				+	
Pelecopsis mengei (Simon, 1884)	T	T		+	
P. parallela (Wider, 1834)	*				
Perregrinus deformis (Tanasevitch, 1982)	T	T		+	+
Perro subtilipes (Tanasevitch, 1985)	T	T			
Poeciloneta theridiformis (Emerton, 1911)	**	*			
P. variegata (Blackwall, 1841)	K, T	T		+	+
Porrhomma pallidum Jackson, 1913	*	*			
P. pygmaeum (Blackwall, 1834)	T	T			
Praestigia groenlandica Holm, 1967	T	T			
Praestigia pini (Holm, 1950)				+	
Proislandiana pallida (Kulczynski, 1908)	T	T			
Pseudocyba miracula Tanasevitch, 1984				+	+
Savignya frontata Blackwall, 1833			*		
S. nenilini Marusik, 1988	T	T			

Table (continuation).

Family, Species	Polar Urals Mts.		Environs of the Polar Urals Mts.		
Polar Urals **Beyond from Polar Urals fauna**	Polar Urals Mts.	Sob River Basin	Ob River	South Yamal	Vorkuta
Savignya producta Holm, 1977	T	T			+
Scotinotylus alpigenus (L.Koch, 1869)	T	T		+	
Semljicola alticola (Holm, 1950)	**	*			
S. angulatus (Holm, 1963)				+	
S. barbiger (L.Koch, 1879)				+	
S. latus (Holm, 1939)				+	
S. lapponicus (Holm, 1939)				+	
S. thaleri (Eskov, 1981)	T	T		+	+
Sibirocyba incerta (Kulczynski, 1916)	K				
Silometopoides sphagnicolus Eskov et Marusik, 1992				+	
Silometopus incurvatus (O.Pickard-Cambridge, 1873)				+	
S. sibiricus Eskov, 1989	**	*			
S. uralensis Tanasevitch, 1985	T	T			
Stemonyphantes conspersus (L.Koch, 1879)	K, T	T	K	+	
Tenuiphantes alacris (Blackwall, 1853)	T	T			
T. mengei (Kulczynski, 1887)	*	*			
T. nigriventris (C.L.Koch, 1879)	K, T	T	K	+	
Thaleria orientalis Tanasevitch, 1984	**	*		+	+
Tibioplus diversus (L.Koch, 1879)	T	T		+	
Tiso aestivus (L.Koch, 1872)				+	
Tmeticus nigriceps (Kulczynski, 1916)				+	
Trichopterna thorelli (Westring, 1861)				+	
Tubercithorax subarcticus (Tanasevitch, 1984)	T	T		+	+
Typhochrestus latithorax (Strand, 1907)	T	T			+
Wabasso hilairoides Eskov, 1988				+	
W. millidgei Eskov, 1988				+	
W. questio (Chamberlin, 1948)				+	
Walckenaeria antica (Wider, 1834)	T	T			
W. capito (Westring, 1861)	T	T			
W. cuspidata Blackwall, 1833				+	
W. karpinskii (O.Pickard-Cambridge, 1873)	T	T		+	
W. kochi (O.Pickard-Cambridge, 1872)				+	
W. korobeinikovi Esyunin et Efimik, 1996	T	T			
W. nodosa O.Pickard-Cambridge, 1873	*	*			+
W. unicornis O.Pickard-Cambridge, 1861	*	*		+	
Wubanoides uralensis (Pakhorukov, 1981)	T	T			+
Zornella cultrigera (L.Koch, 1879)	T	T		+	+
Tetragnathidae					
Pachygnatha clercki Sundevall, 1823	K		K, Ol	+	
Tetragnatha extensa (Linnaeus, 1758)	K, T	T	K, Ol	+	
Araneidae					
Aculepeira carbonarioides (Keyserling, 1892)	K, T	T			
Aculepeira packardi (Thorell, 1875)	**	*			

Table (continuation).

Family, Species	Polar Urals Mts.		Environs of the Polar Urals Mts.		
Polar Urals **Beyond from Polar Urals fauna**	Polar Urals Mts.	Sob River Basin	Ob River	South Yamal	Vorkuta
Araneus alsine (Walckenaer, 1802)	*	*			
Araneus quadratus Clerck, 1758	*	*		+	
Hypsosinga albovittata (Westring, 1851)	*	*			
H. pygmaea (Sundevall, 1831)	*	*			
Larinioides cornutus (Clerck, 1758)	K		K, Ol	+	
L. patagiatus (Clerck, 1758)	T	T		+	
Lycosidae					
Acantholycosa norvegica (Thorell, 1872)	K	*			
Alopecosa aculeata (Clerck, 1758)	K, T	T		+	
A. frigens (Kulczynski, 1916)	K				
A. hirtipes (Kulczynski, 1908)	K, T	K, T		+	
A. insolita (L.Koch, 1879)				+	
A. mutabilis (Kulczynski, 1908)	K			+	
A. solivaga (Kulczynski, 1901)	K	*		+	
A. yamalensis Esyunin, 1996				+	
Pardosa agrestis (Westring, 1861)				+	
P. agricola (Thorell, 1856)	*	*		+	
P. atrata (Thorell, 1873)	*	*	K	+	
P. eiseni (Thorell, 1875)	K, T	K, T	K	+	
P. hyperborea (Thorell, 1872)	T	T		+	
P. indecora L.Koch, 1879	K, T	T		+	
P. lapponica (Thorell, 1872)	T	T		+	
P. lasciva L.Koch, 1879	T	T			
P. lugubris (Walckenaer, 1802)				+	
P. oljunae Lobanova, 1978				+	
P. plumipes (Thorell, 1875)	*	*		+	
P. septentrionalis (Westring, 1861)	K, T	K, T		+	
P. tesquorum (Odenvall, 1901)	*	*		+	
Pirata sp.			*		
Tricca alpigena (Doleschall, 1852)	K, T	K, T		+	
Hahniidae					
Cryphoeca silvicola (C.L.Koch, 1834)	T	T			
Hahnia ononidum Simon, 1875	T	T			
Dictynidae					
Arctella lapponica (Holm, 1945)	**	*		+	
Argenna prominula Tullgren, 1948	*	*			
Dictyna alaskae Chamberlin et Ivie, 1947				+	
D. arundinacea (Linnaeus, 1758)				+	
D. major Menge, 1869	K, T	T		+	
D. schmidti Kulczynski, 1926				+	
D. tyshchenkoi Marusik, 1988	**	*			
Amaurobiidae					
Arctobius agelenoides (Emerton, 1919)	*	*			

Table (continuation).

Family, Species	Polar Urals Mts.		Environs of the Polar Urals Mts.		
Polar Urals **Beyond from Polar Urals fauna**	Polar Urals Mts.	Sob River Basin	Ob River	South Yamal	Vorkuta
Clubionidae					
Clubiona kulczynskii Lessert, 1905	T	T		+	
C. norvegica Strand, 1900	*	*		+	
C. reclusa O.Pickard-Cambridge, 1863				+	
C. stagnatilis Kulczynski, 1897			K	+	
C. trivialis C.L.Koch, 1843	*	*			+
Gnaphosidae					
Gnaphosa microps Holm, 1939	K, T	K, T	K	+	
G. muscorum (L.Koch, 1866)	K, T	T	K	+	
G. nigerrima (L.Koch, 1878)				+	
G. orites Chamberlin, 1922	K	K		+	
G. sticta Kulczynski, 1908	*	*			
Haplodrassus hiemalis (Emerton, 1909)	**	*		+	
H. moderatus (Kulczynski, 1897)	O	O		+	
H. signifer (C.L.Koch, 1839)				+	
H. soerenseni (Strand, 1900)	T	T			
Micaria alpina L.Koch, 1872	*	*			+
M. tripunctata Holm, 1978	T	T		+	
Zelotes subterraneus (C.L.Koch, 1833)				+	
Zoridae					
Zora sp.	*	*			
Philodromidae					
Philodromus cf. *alascensis* Keyserling, 1884	**	*			
Ph. cespitum (Walckenaer, 1802)			*		
Ph. fallax Sundevall, 1832				+	
Ph. histrio (Latreille, 1819)			*		
Thanatus arcticus Thorell, 1872	T	T		+	
Th. bungei (Kulczynski, 1908)	*	*			
Th. coloradensis Keyserling, 1880	E&E	E&E			
Th. striatus (C.L.Koch, 1845)	*	*			
Tibellus maritimus (Menge, 1875)			OI	+	
T. oblongus (Walckenaer, 1802)	T	T			
Thomisidae					
Misumena vatia (Clerck, 1758)			*		
Ozyptila arctica Kulczynski, 1908	T	T		+	+
O. sincera Kulczynski, 1926	**	*	*		
O. trux (Blackwall, 1846)	T	T		+	
Xysticus albidus Grese, 1909	**	*		+	
X. audax (Schrank, 1803)	*	*			
X. britcheri Gertsch, 1934	T	T		+	
X. obscurus Collett, 1877	**	*			
X. viduus Kulczynski, 1898	T	T		+	

Table (continuation).

Family, Species	Polar Urals Mts.		Environs of the Polar Urals Mts.		
Polar Urals **Beyond from Polar Urals fauna**	Polar Urals Mts.	Sob River Basin	Ob River	South Yamal	Vorkuta
Salticidae					
Bianor aurocinctus (Ohlert, 1865)				+	
Chalcoscirtus alpicola (L.Koch, 1876)				+	+
C. hyperboreus Marusik, 1991					+
Dendryphantes czekanowskii Proszynski, 1979	**	*		+	
D. rudis (Sundevall, 1832)	T	T			
Euophrys flavoatra (Grube, 1861)	T	T			
Evarcha arcuata (Clerck, 1758)				+	
Heliophanus dampfi Schenkel, 1923	*	*			
TOTAL species:	174	161	23	161	32

Eskov K.Yu. 1987. [New data on the spider genus *Hilaira* (Aranei, Linyphiidae) in the fauna of the USSR] // Zool. zhurn. T.66. No.7. P.1020-1031 [in Russian, with English summary].

Eskov K.Yu. 1988. Spiders (Aranei) of Middle Siberia // Materialy po faune Srednei Sibiri i prilezhashchikh rayonov Mongolii. Moscow: Inst. evol. morphol. i ekol. zhivotnykh. P.101-155, 185.

Eskov K.Yu. 1994. Catalogue of the linyphiid spiders of northern Asia (Arachnida, Araneae, Linyphiidae). Sofia-Moscow: PEN-SOFT Publ. 144 pp.

Esyunin, S.L., Efimik V.E. 1996. Catalogue of the spiders (Arachnida, Aranei) of the Urals. Moscow: KMK Scientific Press. 229 pp.

Esyunin S.L., Efimik V.E. & Polyanin A.B. 1995. Remarks on the Ural spider fauna, 5. New records of spider species of the family Linyphiidae from the Urals (Arachnida Aranei) // Arthropoda Selecta. Vol.4. No.2. P.49-71.

Kulczynski W. 1916. Araneae Sibiriae occidentalis Arcticae // Mem. Acad. Imp. Sci. Petrograd. Ser.VIII. Cl. phys.-math. T.28. Fasc.11. P.1-44, Tab.I-II.

Marusik Yu.M., Hippa H., Koponen S. 1996. Spiders (Araneae) from the Altai area, Southern Siberia // Acta Zool. fenn.Vol. 201. P. 11-45.

Olshvang V.N. 1977. [Bio mass and dynamics of arthropod mesofauna population in the Priobskaya tundra] // Biotsenoticheskaya rol' zhivotnykh v lesotundre Yamala. Trudy Inst. ekologii rasteniy i zhivotnykh. Sverdlovsk. No.106. P.31-71 [in Russian].

Ovtsharenko V.I. 1982. [A systematic list of the spider family Gnaphosidae (Aranei) of the European part of the USSR and Caucasus] // Entomol. obozr. T.61. No.4. P.830-844 [in Russian, with English summary].

Schikora H.B. 1993. *Meioneta mossica* sp.n., a new spider close to M. saxatilis (Blackwall) from Northern and Central Europe (Araneae: Linyphiidae) // Bull. Br. arachnol. Soc. Vol.9. Pt.4. P.157-163.

Tanasevitch, A.V. 1985. [To the study of the spiders (Aranei) of the Polar Urals] // Fauna i ekol. paukov SSSR. Trudy Zool. inst. Akad. nauk SSSR. T.139. P.52-62 [in Russian, with English summary].