Invertebrate Zoology, 2020, 17(1): 36–43

The first records of lithobiid centipedes (Chilopoda: Lithobiomorpha: Lithobiidae) from the Kemerovo Area, southwestern Siberia, Russia

P.S. Nefediev[1,2,3], G.Sh. Farzalieva[4], I.H. Tuf[5], D.A. Efimov[6]

[1] Altai State University, Lenin Avenue, 61, Barnaul 656049 Russia. E-mail: p.nefediev@mail.ru
[2] Tomsk State University, Lenin Avenue, 36, Tomsk 634050 Russia.
[3] Tigirek State Nature Reserve, Nikitina Street, 111, Barnaul 656049 Russia.
[4] Perm State University, Bukireva Street, 15, Perm 614600 Russia. E-mail: fgsh@psu.ru
[5] Palacký University, Šlechtitelů, 27, Olomouc 77900, Czech Republic. E-mail: ivan.tuf@upol.cz
[6] Kemerovo State University, Krasnaya Street, 6, Kemerovo, 650043, Russia. E-mail: efim_d@mail.ru

ABSTRACT. Based on a small material from the Kemerovo Area, SW Siberia, Russia, the first data on the lithobiid centipede fauna are given from there. Six lithobiid species have been revealed: *Lithobius* (*Ezembius*) *ostiacorum* Stuxberg, 1876, *L.* (*E.*) *proximus* Sseliwanoff, 1880, *L.* (*E.*) *sibiricus* Gerstfeldt, 1859, *L.* (*Monotarsobius*) *crassipes* L. Koch, 1862, *L.* (*M.*) *curtipes* C.L. Koch, 1847 and *L.* (*M.*) *fugax* Stuxberg, 1876. Moreover, the genus *Lithobius* Leach, 1814 and two subgenera, *Ezembius* Chamberlin, 1919 and *Monotarsobius* Verhoeff, 1905, and the family Lithobiidae they belong to, are new to the Kemerovo Area as well. The distributions of all species encountered in the study region are mapped.
How to cite this article: Nefediev P.S., Farzalieva G.Sh., Tuf I.H., Efimov D.A. 2020. The first records of lithobiid centipedes (Chilopoda: Lithobiomorpha: Lithobiidae) from the Kemerovo Area, southwestern Siberia, Russia // Invert. Zool. Vol.17. No.1. P.36–43. doi: 10.15298/invertzool.17.1.04

KEY WORDS: lithobiomorph centipedes, fauna, new records, Kemerovo Area, Siberia, Russia.

Первые находки многоножек-костянок (Chilopoda: Lithobiomorpha: Lithobiidae) в Кемеровской области (юг Западной Сибири, Россия)

П.С. Нефедьев[1,2,3], Г.Ш. Фарзалиева[4], И.Х. Туф[5], Д.А. Ефимов[6]

[1] Алтайский государственный университет, проспект Ленина, 61, Барнаул 656049 Россия. E-mail: p.nefediev@mail.ru
[2] Томский государственный университет, проспект Ленина, 36, Томск 634050 Россия.
[3] Государственный природный заповедник «Тигирекский», улица Никитина, 111, Барнаул 656049 Россия.
[4] Пермский государственный университет, улица Букирева, 15, Пермь 614600 Россия. E-mail: fgsh@psu.ru
[5] Palacký University, Šlechtitelů, 27, Olomouc 77900, Czech Republic. E-mail: ivan.tuf@upol.cz
[6] Кемеровский государственный университет, улица Красная, 6, Кемерово 650043 Россия. E-mail: efim_d@mail.ru

РЕЗЮМЕ. По небольшому материалу из Кемеровской области (юг Западной Сибири, Россия) приводятся первые сведения о фауне многоножек-костянок этого региона. Там обнаружено шесть видов: *Lithobius* (*Ezembius*) *ostiacorum* Stuxberg, 1876, *L.* (*E.*) *proximus* Sseliwanoff, 1880, *L.* (*E.*) *sibiricus* Gerstfeldt, 1859, *L.* (*Monotarsobius*) *crassipes* L. Koch, 1862, *L.* (*M.*) *curtipes* C.L. Koch, 1847 и *L.* (*M.*) *fugax* Stuxberg, 1876. Кроме того, род *Lithobius* Leach, 1814 и два подрода, *Ezembius* Chamberlin, 1919 и *Monotarsobius* Verhoeff, 1905, а также семейство Lithobiidae, к которому они принадлежат, также являются новыми для Кемеровской области. Для всех видов выполнено картирование находок в исследуемом регионе.
Как цитировать эту статью: Nefediev P.S., Farzalieva G.Sh., Tuf I.H., Efimov D.A. 2020. The first records of lithobiid centipedes (Chilopoda: Lithobiomorpha: Lithobiidae) from the Kemerovo Area, southwestern Siberia, Russia // Invert. Zool. Vol.17. No.1. P.36–43. doi: 10.15298/invertzool.17.1.04

КЛЮЧЕВЫЕ СЛОВА: многоножки-костянки, фауна, новые находки, Кемеровская область, Западная Сибирь, Россия.

Introduction

The Kemerovo Area is located in southwestern Siberia and lies between the West Siberian Plain and the South Siberian mountains. It spans about 500 km north to south and 300 km west to east, bordering on the Tomsk Area in the north, the Krasnoyarsk Province in the northeast, the Republic of Khakassia in the east, the Republic of Altai in the south, and the Altai Province and the Novosibirsk Area in the west. The study area is subject to a continental climate, with cold, snowy and long winters, and warm, but short summers. All watercourses in the Kemerovo Area belong to the Ob River Basin, with the Tom River as a major waterway. The vegetation of this territory is diverse, varying from the tundra and alpine meadows in the highlands and *Abies sibirica* and *Populus tremula* woodlands on mountain slopes to forested steppes and steppes over the plains.

Our knowledge of lithobiomorph centipedes of southwestern Siberia is very scarce and incomplete. While it is possible to compile preliminary lists of the regional faunas of Lithobiomorpha for the Novosibirsk, Tyumen, Tomsk and Omsk areas, the Khanty-Mansi Autonomous and Yamalo-Nenets Autonomous regions, the Altai Province, and the Republic of Altai (Gerstfeldt, 1859; Zalesskaja, 1978; Nefediev, 2001; Striganova, Poryadina, 2005; Sergeeva, 2010, 2013; Bukhkalo, Sergeeva, 2012; Bukhkalo *et al*., 2014; Nefediev *et al*., 2016, 2017a, b, c, 2018; Dyachkov, 2017b), the Kemerovo Area has hitherto remained a complete lacuna with respect to its lithobiid fauna. Even though a few papers by Titova (1969, 1972a, b) are known on geophilomorph centipedes from this area, there seems to exist neither published data nor material on lithobiid centipedes collected during those surveys. The present paper thus provides a primary inventory of Lithobiidae of the Kemerovo Area.

The distribution maps were composed using QGIS 3.8.0-Zanzibar.

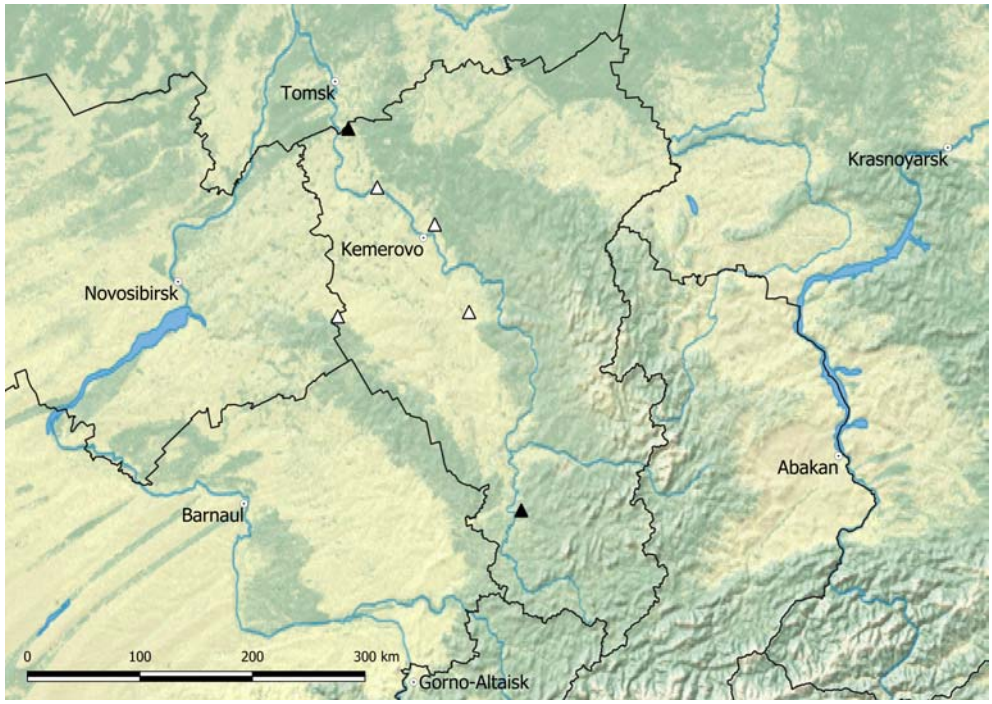
The material treated herein has been deposited in the collections of the Perm State University (PSU) and the Altai State University, Barnaul, Russia (ASU), as indicated below.

Taxonomic part

Class Chilopoda
ORDER Lithobiomorpha
Family LITHOBIIDAE

Lithobius (*Ezembius*) *ostiacorum*
Stuxberg, 1876
Map 1.

MATERIAL EXAMINED (all Russia, southwestern Siberia, **Kemerovo Area**). 1 cf.



Map 1. Distribution of *Lithobius* (*Ezembius*) *ostiacorum* (white triangle) and *L.* (*E.*) *proximus* (black triangle) in the Kemerovo Area.
Карта 1. Распространение *Lithobius* (*Ezembius*) *ostiacorum* (белый треугольник) и *L.* (*E.*) *proximus* (черный треугольник) в Кемеровской области.

ostiacorum subadult ♀ (PSU-919), **Krapivinskii District**, 5–6 km N of Taradanovo, 54°40′N, 86°41′E, *Populus tremula* forest, in litter and rotten logs, 13.VIII.2017; 1 ♂ (PSU-803), **Yashkino District**, 2–3 km N of Pacha, 55°43′23.8″N 85°29′28.6″E, *Betula pendula* forest, 20.VI. 2018; 1 subadult ♀ (PSU-805), **Promyshlennaya District**, N of Salair Ridge, W part of Tanaev Pond, 54°49'N, 85°09'E, *Betula pendula* and *Pinus sylvestris* forest, 160 m a.s.l., 8.VIII.2018; 2 ♀♀ (PSU-802), **Kemerovo District**, near Andreevka, 55°27′11.3″N, 86°13′ 55.9″E, *Abies sibirica* forest with *Populus tremula* and *Pinus sibirica*, 14.VIII.2018, all leg. D.A. Efimov.

DISTRIBUTION. Originally described from the Yenisei River valley, Krasnoyarsk Province, central Siberia (Stuxberg, 1876a, b), *L.* (*E.*) *ostiacorum* was later redescribed from type material (Eason, 1976). The distribution of this species is mostly confined to central and southwestern Siberia (the Krasnoyarsk Province, the Irkutsk Area, the Altai Province and the Republic of Altai) (Eason, 1976; Zalesskaja, 1978; Nefediev *et al*., 2017a, b, 2018). It is also known from N Mongolia (Poloczek *et al*., 2016).

REMARK. This species is found in the Kemerovo Area for the first time.

Lithobius (*Ezembius*) *proximus*
Sseliwanoff, 1880
Map 1.

MATERIAL EXAMINED (all Russia, southwestern Siberia, **Kemerovo Area**). 2 ♀♀ (ASU), **Novokuznetsk District**, ca 8 km E Kuzedeevo, right bank of Malyi Tiosh River, *Tilia sibirica*, on hill slope, by hand, 9.VIII.2000, leg. P.S. Nefediev, A.V. Udaloj; 2 ♂♂, 2 ♀♀, 2 juv. (ASU), same District, ca 7 km E Kuzedeevo, Malyi Tiosh River valley, 9.VIII.2000; 2 ♀♀ (ASU), same District, ca 6 km E Kuzedeevo,

Map 2. Distribution of *Lithobius* (*Ezembius*) *sibiricus* (white circle) and *L.* (*Monotarsobius*) *fugax* (black circle) in the Kemerovo Area.
Карта 2. Распространение *Lithobius* (*Ezembius*) *sibiricus* (белый круг) и *L.* (*Monotarsobius*) *fugax* (черный круг) в Кемеровской области.

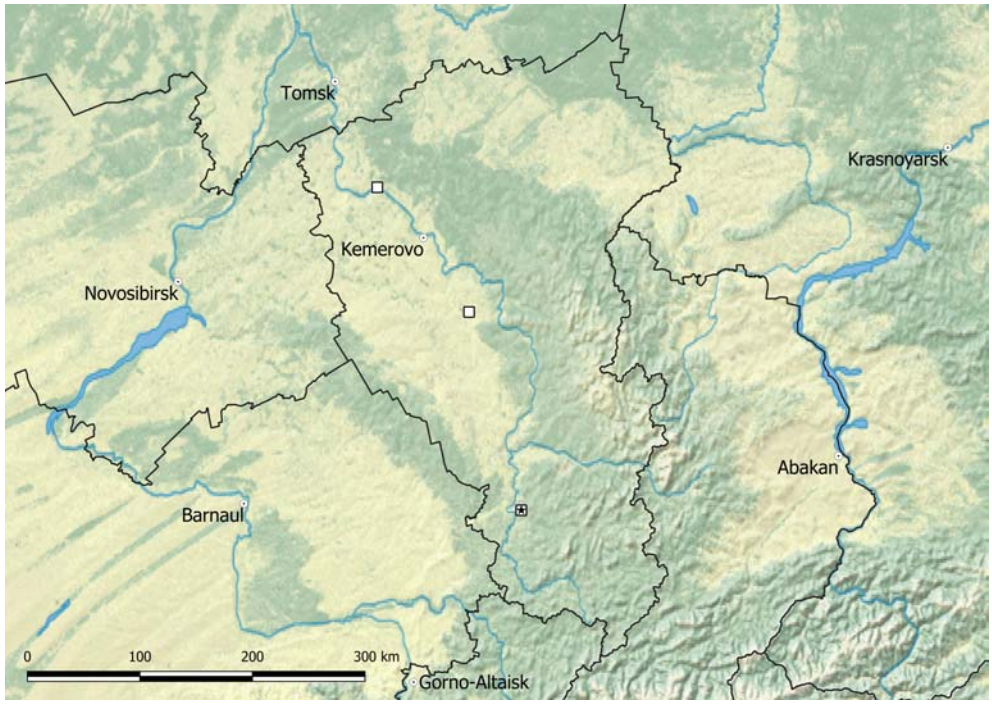
Tilia sibirica grove, on hill top, by hand, 12.VIII.2000; 1 ♂, 1 ♀, 4 juv. (ASU), **Yashkino District**, near Kosogorovo, *Populus tremula* and *Betula pendula* forest, on mushrooms, 15–18.VIII.2000, all leg. P.S. Nefediev.

DISTRIBUTION. Originally described from Irkutsk, central Siberia (Sseliwanoff, 1880b), *L.* (*E.*) *proximus* is widespread in European Russia, Ukraine, the Urals, southwestern and southeastern Siberia, as well as the Far East of Russia, both mainland and insular (Alekseeva, 1974; Kurcheva, 1977; Zalesskaja, 1978; Chornyi, Kosyanenko, 2003; Striganova, Poryadina, 2005; Farzalieva, Esyunin, 2008; Bukhkalo, Sergeeva, 2012; Sergeeva, 2013; Bukhkalo *et al*., 2014; Nefediev *et al*., 2017a, b, 2018; Vorobiova, 1999; Rybalov, 2002; Vorobiova *et al*., 2002), and also in Eastern Kazakhstan (Tuf, 2007; Tuf *et al*., 2010; Dyachkov, 2017b, 2019). The westernmost record of this species is presently the Wigry National Park, Poland (Wytwer, Tajovský, 2019).

REMARKS. The above are the first formal records of this species from the Kemerovo Area.

Lithobius (*Ezembius*) *sibiricus* Gerstfeldt, 1859
Map 2.

MATERIAL EXAMINED (all Russia, southwestern Siberia, **Kemerovo Area**). 1 ♀ (ASU), **Novokuznetsk District**, ca 8 km E Kuzedeevo, right bank of Malyi Tiosh River, *Tilia sibirica*, on hill slope, soil sampling, 9.VIII.2000, leg. P.S. Nefediev, A.V. Udaloj; 1 ♂, 1 ♀, 1 juv. (ASU), same District, ca 8 km E Kuzedeevo, Malyi Tiosh River valley, *Tilia sibirica*, 9.VIII.2000; 2 ♂♂, 3 ♀♀ (ASU), same District, ca 6 km E Kuzedeevo, *Tilia sibirica* grove, on hill top, soil sampling, by hand, 12.VIII.2000; 1 ♂ (ASU), same District, ca 6 km E Kuzedeevo, *Betula pendula* forest, pitfall



Map 3. Distribution of *Lithobius* (*Monotarsobius*) *curtipes* (white square) and *L.* (*M.*) *crassipes* (black asterisk) in the Kemerovo Area.
Карта 3. Распространение *Lithobius* (*Monotarsobius*) *curtipes* (белый квадрат) и *L.* (*M.*) *crassipes* (черная звезда) в Кемеровской области.

traps, 12.VIII.2000; 2 ♂♂ (ASU), same District, near Kuzedeevo Forestry, 12.VIII.2000; 1 ♀ (ASU), **Yashkino District**, near Kosogorovo, *Populus tremula* and *Betula* forest, on mushrooms, 15–18.VIII.2000, all leg. P.S. Nefediev; 1 subadult ♂ (PSU-715), **Krapivinskii District**, floodplain of Beriozovka River, 55°04′N, 86°18′E, forest-steppe, 14.V.2017; 1 ♂ cf. *sibiricus* (PSU-917), same District, 5–6 km N of Taradanovo, 54°40′N, 86°41′E, *Populus tremula* forest, in litter and rotten logs, 13.VIII.2017; 1 ♂, 1 ♀ (PSU-920), **Kemerovo District**, Kriokovo, 55°31′N, 85°52′E, 20.V.2017; 1 ♂ (PSU-801), same District, *Pinus sylvestris* forest planting, 55°29′19.6″N, 86°13′09.5″E, 14.VIII.2018, all leg. D.A. Efimov.

DISTRIBUTION. Originally described by Gerstfeldt (1859) from several localities in Siberia and the Russian Far East, this species was later redescribed by Eason (1976) from one of Stuxberg's female syntypes of *Lithobius fugax* from Krasnoyarsk. At present, *L.* (*E.*) *sibiricus* is widely distributed across the Asian part of Russia (Sseliwanoff, 1880a, b, 1881; Attems, 1909; Molodova, 1972; Alekseeva, 1974; Eason, 1976; Kurcheva, 1977; Zalesskaja, 1978; Nefediev, 2001; Vorobiova, 1999; Vorobiova *et al*., 2002; Nefediev, Aripov, 2013; Nefediev *et al*., 2016, 2017a, b, 2018; Dyachkov, 2017a, b), also known from northern Mongolia (Poloczek *et al*., 2016).

REMARK. *Lithobius* (*E.*) *sibiricus* is formally recorded from the Kemerovo Area for the first time.

Lithobius (*Monotarsobius*) *crassipes*
L. Koch, 1862
Map 3.

MATERIAL EXAMINED 1 ♂, 1 juv. (ASU), Russia, southwestern Siberia, **Kemero-**

vo Area, **Novokuznetsk District**, ca 8 km E Kuzedeevo, *Tilia sibirica* grove, under bark and in moss on trunks, 10.VIII.2000, leg. P.S. Nefediev.

DISTRIBUTION. A western Palaearctic species, *L.* (*M.*) *crassipes* is widespread in mainland Europe and the Caucasus, the Canaries, Madeira, North Africa and eastern Kazakhstan (Zalesskaja, 1978; Bonato *at al*., 2016; Dyachkov *et al*., 2016). In Asian Russia, this species has previously been known only from the Yenisei River region, Krasnoyarsk Province, central Siberia (Stuxberg, 1876a, b), as well as the Tyumen Area (Sergeeva, 2010, 2013; Bukhkalo *et al*., 2014) and the Altai Province (Nefediev *et al*., 2016), both last regions listed lying in southwestern Siberia.

REMARKS. The above is the first formal record of this species from the Kemerovo Area.

Lithobius (*Monotarsobius*) *curtipes*
C.L. Koch, 1847
Map 3.

MATERIAL EXAMINED (all Russia, southwestern Siberia, **Kemerovo Area**). 3 ♂♂, 3 ♀♀ (ASU), **Novokuznetsk District**, ca 8 km E Kuzedeevo, left bank of Malyi Tiosh River, mixed forest, 9.VIII.2000; 4 ♂♂, 4 ♀♀, 3 juv. (ASU), same District, ca 8 km E Kuzedeevo, right bank of Malyi Tiosh River, *Tilia sibirica*, on hill slope, soil sampling, by hand, 9.VIII.2000, all leg. P.S. Nefediev, A.V. Udaloj; 2 ♀♀, 1 juv. (ASU), same District, ca 6 km E Kuzedeevo, left bank of Malyi Tiosh River, *Betula pendula* and *Populus tremula* forest, soil sampling, by hand, 10.VIII.2000, leg. A.V. Udaloj; 1 ♂, 1 ♀, 6 juv. (ASU), same District, ca 8 km E Kuzedeevo, left bank of Malyi Tiosh River, mixed forest, 10.VIII.2000; 4 ♂♂, 4 ♀♀, 5 juv. (ASU), same District, ca 6 km E Kuzedeevo, *Tilia sibirica* grove, on hill top, soil sampling, by hand, 12.VIII.2000, all leg. P.S. Nefediev; 1 ♂ (PSU-918), **Krapivinskii District**, 5–6 km N of Taradanovo, 54°40′N, 86°41′E, *Populus tremula* forest, in litter and rotten logs, 13.VIII.2017; 1 ♀ (PSU-804), **Yashkino District**, 2–3 km N of Pacha, 55°43′23.8″N 85°29′28.6″E, *Betula pendula* forest, 26.VI.2018, all leg. D.A. Efimov.

DISTRIBUTION. A trans-Palaearctic species widely distributed in Europe, the Urals, the Near East, the Arabian Peninsula, Asian Russia, Kazakhstan, and northern Mongolia (Zalesskaja, 1978; Farzalieva, Esyunin, 2008; Bonato *et al*., 2016; Poloczek *et al*., 2016; Dyachkov, 2019). In Siberia, this species has previously been recorded from the Krasnoyarsk Province (Stuxberg, 1876a, b: as *L. captivus*; Vorobiova, 1999; Rybalov, 2002; Vorobiova *et al*., 2002), the Altais and the Novosibirsk Area (Zalesskaja, 1978), the Tyumen Area (Striganova, Poryadina, 2005; Sergeeva, 2010, 2013; Bukhkalo, Sergeeva, 2012; Bukhkalo *et al*., 2014), the Khanty-Mansi Autonomous and Yamalo-Nenets Autonomous regions (Striganova, Poryadina, 2005), the Altai Province and the Tomsk Area (Nefediev *et al*., 2016, 2017b, 2018), the Omsk Area (Nefediev *et al*., 2017c), and the Republic of Altai (Nefediev *et al*., 2017a).

REMARKS. This species is herewith recorded from the Kemerovo Area for the first time.

Lithobius (*Monotarsobius*) *fugax*
Stuxberg, 1876
Map 2.

MATERIAL EXAMINED. 1 ♀ (PSU-1158), Russia, southwestern Siberia, **Kemerovo Area**, Kuznetsk Depression, **Prokopievsk District**, 6–7 km NE of Tykhta, Karakanskii Mt. Range, meadow steppe, under stone, 16.VI.2015, leg. D.A. Efimov.

DISTRIBUTION. Zalesskaja (1978) stated this species as being known from western and central Siberia, as well as Mongolia. Originally described from the Yenisei River valley, Krasnoyarsk Province (Stuxberg, 1876a, b), this species was later redescribed by Eason (1976) from Stuxberg's type material and synonymized it with *Monotarsobius kaszabi* Loksa, 1965, the latter species found in Mongolia.

REMARKS. This species is found in the Kemerovo Area for the first time.

Acknowledgements. We are sincerely grateful to S.I. Golovatch (Moscow, Russia) who kindly checked the English of an advanced draft.

References

Alekseeva E.E. 1974. [Soil mesofauna of steppes and forests in western Transbaikalia]. Autoreferate of the Thesis of Candidate (Ph.D.) of Biological Sci. Degree. Moscow. 20 p. [In Russian]

Attems C.G. 1909. Die Myriopoden der Vega-Expedition // Arkiv för Zoologi. Bd.5. No.3. P.1–84.

Bonato L., Chagas Junior A., Edgecombe G.D., Lewis J.G.E., Minelli A., Pereira L.A., Shelley R.M., Stoev P., Zapparoli M. 2016. ChiloBase 2.0 – A World Catalogue of Centipedes (Chilopoda). Available at http://chilobase.biologia.unipd.it (accessed 30 October 2019).

Bukhkalo S.P., Galitch D.E., Sergeeva E.V., Vazhenina N.V. 2014. [Synopsis of the invertebrate fauna of the southern taiga in western Siberia (basin of the Lower Irtysh)]. Moscow: KMK Scientific Press. 189 p. [In Russian]

Bukhkalo S.P., Sergeeva E.V. 2012. [Interannual dynamics of the composition and structure of soil invertebrate communities in the root terrace of Irtysh River] // Nauchnye vedomosti Belgorodskogo gosudarstvennogo universiteta. Seriya: Estestvennye nauki. No.5 (134). Issue 20. P.59–64 [in Russian].

Chornyi M.G., Kosyanenko O.W. 2003. [Millipedes and centipedes of the Middle Dnieper area] // Zapovidna sprava v Ukraini. Vol.9. No.2. P.64–66 [in Ukrainian].

Dyachkov Yu.V. 2017a. New records of lithobiid centipedes (Chilopoda: Lithobiomorpha) from western Mongolia // Far Eastern Entomologist. No.345. P.34–36.

Dyachkov Yu.V. 2017b. [The first data on the centipede (Chilopoda: Geophilomorpha; Lithobiomorpha) fauna of the Katun Biosphere State Nature Reserve, Altai Mts] // Ukrainian Journal of Ecology. Vol.7. No.4. P.453–456 [in Russian, with English summary].

Dyachkov Yu.V. 2019. New data on lithobiomorph centipedes (Chilopoda: Lithobiomorpha: Anopsobiidae, Henicopidae, Lithobiidae) from Kazakhstan // Arthropoda Selecta. Vol.28. No.1. P.8–20. doi: 10.15298/arthsel. 28.1.02.

Dyachkov Yu.V., Farzalieva G.Sh., Fomichev A.A. 2016. New data on the centipede (Chilopoda) fauna of East Kazakhstan region // Biological Bulletin of Bogdan Chmelnitskiy Melitopol State Pedagogical University. Vol.6. No.3. P.438–442.

Eason E.H. 1976. The type specimens and identity of the Siberian species described in the genus *Lithobius* by Anton Stuxberg in 1876 (Chilopoda: Lithobiomorpha) // Zoological Journal of the Linnean Society. No.58. P.98–127.

Farzalieva G.Sh., Esyunin S.L. 2008. A review of the centipede (Lithobiomorpha, Henicopidae, Lithobiidae) fauna of the Urals and Cis-Ural area // Entomological Review. Vol.88. No.5. P.598–623. https://doi.org/10.1134/S0013873808050102.

Gerstfeldt G. 1859. Ueber einige zum Theil neue Arten Platoden, Anneliden, Myriapoden und Crustaceen Sibiriens, namentlich seines östlichen Theiles und des Amur-Gebiets // Mémoires de l'Académie Impériale des Sciences. St. Petersbourg. T.8. S.1–36.

Kurcheva G.F. 1977. [Soil invertebrates of the Soviet Far East]. Moscow: Nauka Publ. 132 p. [In Russian]

Molodova L.P. 1972. [Soil invertebrates of southern Sakhalin and their significance for soil characteristics]. Autoreferate of the Thesis of Candidate (Ph.D.) of Biological Sci. Degree. Moscow. 29 p. [In Russian]

Nefediev P.S. 2001. [On the fauna and ecology of Myriapoda in the environs of the village of Smolenskoe, Altai Province] // Landshafty Zapadnoj Sibiri: problemy issledovaniy, ekologiya i ratsionalnoe ispolzovanie. Materialy VII Mezhdunarodnoy mezhvuzovskoy konferentsii, posvyaschyonnoy Dnyu Zemli. Biysk: Biysk Pedagogical State University Publ. P.84–86 [in Russian].

Nefediev P.S., Aripov V.S. 2013. [A history of the study of biodiversity of centipedes (Chilopoda) in Siberia in the XIX century] // Sbornik nauchnykh statei mezhdunarodnoi molodiozhnoi shkoly-seminara "Lomonosovskie chteniya na Altaye". Barnaul: Altai State University Publ. Vol.6. P.40–42 [in Russian].

Nefediev P.S., Farzalieva G.Sh., Tuf I.H. 2017a. A preliminary review of the fauna of the Altai State Nature Biosphere Reserve, southwestern Siberia, Russia (Chilopoda: Lithobiomorpha, Geophilomorpha) // Arthropoda Selecta. Vol.26. No.3. P.217–224.

Nefediev P.S., Farzalieva G.Sh., Tuf I.H., Nedoev H.Kh., Niyazov S.T. 2017b. Millipede and centipede assemblages on the northern and southern slopes of the lowland Altais, southwestern Siberia, Russia (Diplopoda, Chilopoda) // Tropical Natural History. Suppl.5. 17th International Congress of Myriapodology, Krabi, Thailand. Book of abstracts. P.13.

Nefediev P.S., Farzalieva G.Sh., Tuf I.H., Nedoev Kh.Kh., Niyazov S.T. 2018. Millipede and centipede assemblages on the northern and southern slopes of the lowland Altais, southwestern Siberia, Russia (Diplopoda, Chilopoda) // Stoev P., Edgecombe G.D. (eds.). Proceedings of the 17th International Congress of Myriapodology, Krabi, Thailand. ZooKeys. Vol.741. P.219–254. https://doi.org/10.3897/zookeys.741.21936.

Nefediev P.S., Knyazev S.Yu., Farzalieva G.Sh., Tuf I.H. 2017c. A contribution to the myriapod fauna of the Omsk Area, Siberia, Russia (Myriapoda: Diplopoda, Chilopoda) // Arthropoda Selecta. Vol.26. No.2. P.113–118.

Nefediev P.S., Tuf I.H., Farzalieva G.Sh. 2016. Centipedes from urban areas in southwestern Siberia, Russia (Chilopoda). Part 1. Lithobiomorpha // Arthropoda Selecta. Vol.25. No.3. P.257–266.

Poloczek A., Pfeiffer M., Schneider R., Mühlenberg M. 2016. The Chilopoda (Myriapoda) of the Khentey-Mountain Range, Northern Mongolia. Communities of different forest-types under a varying fire regime // European Journal of Soil Biology. Vol.74. P.114–120.

Rybalov L.B. 2002. [Zonal and landscape changes in soil invertebrate populations in a near-Yenisei River region of Middle Siberia and the role of temperature adaptations in the meridional (zonal) distribution of invertebrates] // Russian Entomological Journal. Vol.11. No.1. P.77–86 [in Russian, with English summary].

Sergeeva E.V. 2010. [Species diversity of centipedes (Chilopoda) in the southern taiga subzone of Western Siberia] // Tobolsk Nauchnyi – 2010. Materialy Vserossiyskoi nauchno-prakticheskoi konferentsii. Tobolsk. P.37–39 [in Russian].

Sergeeva E.V. 2013. [Biotopic distribution and the numbers of centipedes (Chilopoda) in the Irtysh valley of West Siberia, Russia] // Euroasian Entomological Journal. Vol.12. No.6. P.529–533 [in Russian, with English summary].

Sseliwanoff A.W. 1880a. Eine Bemerkung über "*Lithobius sibiricus*" Gerstfeldt's // Zoologischer Anzeiger. Bd.3. Nr.68. P.541–543.

Sseliwanoff A.V. 1880b. [Materials towards the study of Russian myriapods. I. Chilopoda] // Trudy Russkogo Entomologicheskogo Obshchestva. T.11. P.3–26 [in Russian].

Sseliwanoff A.V. 1881. [Lithobiidae deposited in the Museum of the Imperial Academy of Sciences] // Zapiski Akademii Nauk. Vol.37. No.1. P.1–19 [in Russian].

Striganova B.R., Poryadina N.M. 2005. [Soil animal population in boreal forests of the West Siberian Plain]. Moscow: KMK Scientific Press Ltd. 234 p. [In Russian]

Stuxberg A. 1876a. Myriopoder från Sibirien och Waigatsch ön samlade under Nordenskiöldska expeditionen 1875 // Öfversigt af Kongliga Vetenskaps-Akademiens Förhandlingar. Årg.33. No.2. S.11–38.

Stuxberg A. 1876b. On the Myriopoda, from Siberia and Waigatsch Island, collected during the expedition of Prof. Nordenskiöld, 1875 // Annals and Magazine of Natural History. Vol.4. No.17. P.306–318. doi: 10.1080/00222937608681955.

Titova L.P. 1969. [Geophilids of the USSR fauna and news in the distribution of the fam. Mecistocephalidae] // Aleinikova M.M. (ed.). Problemy pochvennoi zoologii. Materialy III Vsesoyuznoi konferentsii. Kazan, 1969. Moscow: Nauka Publ. P.165–166 [in Russian].

Titova L.P. 1972a. [New species of the genus *Escaryus* Cook et Collins (Schendylidae, Chilopoda)] // Ghilarov M.S. (ed.). Ekologiya pochvennykh bespozvonochnykh. Moscow: Nauka Publ. P.94–119 [in Russian].

Titova L.P. 1972b. [Patterns in the distribution of the genus *Escaryus* (Chilopoda) in the USSR] // Ghilarov M.S. (ed.). Problemy pochvennoi zoologii. Materialy IV Vsesoyuznoi konferentsii. Baku, 1972. Moscow: Nauka Publ. P.135–136 [in Russian].

Tuf I.H. 2007. [Diversity of selected taxa of invertebrates in the Altai (East Kazakhstan)] // Sovremennye podkhody k zashchite biologicheskoi variativnosti v kontekste dostizheniya ustoichivogo razvitiya Respibliki Kazakhstan. Sbornik mezhdunarodnogo kazakhstansko-cheshskogo nauchnogo seminara. Ust-Kamenogorsk. P.56–64 [in Czech, with English summary].

Tuf I.H., Dányi L., Kuda F., Chlachula J. 2010. Centipedes of Kazakhstan – new records from Altai // High Mountain Soils Biodiversity, Tbilisi. P.11–12.

Vorobiova I.G. 1999. [Ecological and faunistic characteristics of myriapod populations in the mid-flow region of Yenisei River] // Problemy pochvennoi zoologii. Materialy II (XII) Vserossiyskogo soveschaniya po pochvennoi zoologii. Moscow: KMK Press. P.33–34 [in Russian].

Vorobiova I.G., Rybalov L.B., Rossolimo T.E., Zalesskaja N.T. 2002. [Zonal and landscape distribution of the myriapod fauna and populations (Myriapoda) in the Yenisei River basin] // Izuchenie, sokhranenie i vosstanovlenie bioraznoobraziya ekosistem na Yeniseiskom ekologicheskom transekte: Zhivotnyi mir, etno-ekologicheskie issledovniya, 2. Moscow: IPEE RAS Publ. P.60–71 [in Russian].

Wytwer J., Tajovsky K. 2019. The Siberian centipede species *Lithobius proximus* Sseliwanoff, 1878 (Chilopoda, Lithobiomorpha): a new member of the Polish fauna // ZooKeys. Vol.821. P.1–10. doi: 10.3897/zookeys.821.32250.

Zalesskaja N.T. 1978. [Identification book of the lithobiomorph centipedes of the USSR]. Moscow: Nauka Publ. 212 p. [In Russian]

Responsible editor K.G. Mikhailov