Invertebrate Zoology, 2023, 20(4): 443–446

New records of millipedes (Diplopoda) from European Russia and Crimea

Sergei I. Golovatch

Institute of Ecology and Evolution, Russian Academy of Sciences, Leninsky pr. 33, Moscow 119071 Russia. E-mail: sgolovatch@yandex.ru
ORCID 0000-0001-7159-5484

ABSTRACT. The results of a taxonomic treatment of Diplopoda collected rather recently across European Russia and in Crimea are presented. They concern 14 species or subspecies from six families and five orders. New faunistic information is provided, allowing for the distribution of some millipede species to be refined.
How to cite this article: Golovatch S.I. 2023. New records of millipedes (Diplopoda) from European Russia and Crimea // Invert. Zool. Vol.20. No.4. P.443–446. doi: 10.15298/invertzool.20.4.09

KEY WORDS: faunistics, distribution, Russian Plain, Crimea.

Новые находки двупарноногих многоножек (Diplopoda) из Европейской России и Крыма

С.И. Головач

Институт проблем экологии и эволюции РАН, Ленинский проспект, 33, Москва 119071, Россия.E-mail: sgolovatch@yandex.ru

РЕЗЮМЕ. Представлены результаты таксономической обработки Diplopoda, сравнительно недавно собранных на Русской равнине и в Крыму. Они касаются 14 видов и подвидов из шести семейств и пяти отрядов. Новая фаунистическая информация позволяет уточнить распространение некоторых видов этих многоножек.
Как цитировать эту статью: Golovatch S.I. 2023. New records of millipedes (Diplopoda) from European Russia and Crimea // Invert. Zool. Vol.20. No.4. P.443–446. doi: 10.15298/invertzool.20.4.09

КЛЮЧЕВЫЕ СЛОВА: фаунистика, рапространение, Русская равнина, Крым.

Introduction

Even though the millipede fauna of the Eastern European, or Russian, Plain can boast to be pretty well known since the monograph by Lokshina (1969), several contributions have since allowed to considerably refine their taxonomy and distributions (e.g., Kime, Enghoff, 2011, 2017, 2021; Volkova, 2018; Short *et al*., 2020; Golovatch, 2021). This can be further advanced using the rather abundant diplopod material accumulated in my hands over the last few years, all treated below and deposited in the collection of the Zoological Museum of the Moscow State University (ZMUM), Russia.

Taxonomic part

Order Polyxenida
Family Polyxenidae

Polyxenus lagurus (Linnaeus, 1758)

MATERIAL. 4 ex. (ZMUM), Russia, Crimea, Arabatskaya Strelka, bank of Lake Sivash, salina, 26.IX.2021, N. Kuznetsova, M. Potapov leg.

REMARKS. This subcosmopolitan species has long been known to occur in the Crimean Peninsula

(e.g. Short *et al*., 2020). The new record is remarkable in the animals found living in a salina.

Order Polyzoniida
Family Polyzoniidae

Polyzonium germanicum Brandt, 1837

MATERIAL. 1 juv. (ZMUM), Russia, Pskov Region, Reshety between Ostrov and Novgorod, Sinyaya River delta, *Betula*, *Picea*, *Populus tremula* etc. forest, litter, 8.VII.1988, S.I. Golovatch leg.; 2 ex. (ZMUM), Yaroslavl Region, Myshkin Distr., 2.7 km SE of Florovskoe, *Polytrichum commune* plot, extraction, 11.VII.2019; 1 ♀ (ZMUM), same locality, 2.8 km SE of Florovskoe, *Sphagnum riparium* plot, extraction, 11.VII.2019, all D.A. Filippov, V.V. Yurchenko leg.

REMARKS. This pan-European species is very widespread in Russia as well, ranging from southern Karelia, the Arkhangelsk Region and the Solovetskie Islands in the White Sea in the north to the Volga River basin (Pskov, Vologda, Yaroslavl, Tver, Moscow and Nizhny Novgorod regions, Mari-El, Tatarstan and Baskortostan republics) and Tula Region in the south, and from the Kaliningrad and Leningrad regions in the west to the Chelyabinsk region in the southern Urals in the east (Lokshina, 1969; Kime, Enghoff, 2011).

Order Chordeumatida
Family Mastigophorophyllidae

Mastigophorophyllon saxonicum Verhoeff, 1910

MATERIAL. 1 ♂ juv. (ZMUM), Russia, near Novgorod City, mixed forest, litter, VII.1988, S.I. Golovatch leg.

REMARK. A Central European, hygrophilous and mostly forest-dwelling species presently in apparent decline, as recent records have concerned neither the Baltic states nor Germany (Lokshina, 1969; Kime, Enghoff, 2021). Since the sole previous record of this species from Russia concerned the Kaliningrad Region, above is the first report from the Novgorod Region.

Order Julida
Family Blaniulidae

Nopoiulus kochii (Gervais, 1847)

MATERIAL. 1 juv. (ZMUM), Russia, Moscow Region, Istra Distr., Novorakovo, old grassy compost, 2.VII.2023, O.L. Makarova leg.

Family Julidae

Cylindroiulus latestriatus (Curtis, 1845)

MATERIAL. 1 ♀ (ZMUM), Russia, Yaroslavl Region, Nekouz Distr., near Andreyevskoe, N 58.0030°, E 38.2029°, 22.VIII.2021, I.S. Turbanov leg.

REMARKS. This anthropogenic subcosmopolitan species is rather widely, albeit patchily distributed in European Russia as well, including the Kaliningrad, Leningrad and Moscow regions, and Karelia (Lokshina, 1969; Kime, Enghoff, 2017). The above record is formally new to the Yaroslavl Region of Russia.

Julus terrestris Linnaeus, 1758

MATERIAL. 3 ♀♀, 2 juv. (ZMUM), Russia, Pskov Region, Reshety between Ostrov and Novgorod, Sinyaya River delta, *Betula, Picea, Populus tremula* etc. forest, litter, 8.VII.1988; 1 ♀, 1 juv. (ZMUM), Novgorod Region, SW of Oskuy ca 38 km NE of Chudovo, *Betula*, *Populus tremula*, *Pinus*, *Picea* etc. forest, litter, 12.VII.1988; 1 ♂, 3 ♀♀, 13 juv. (ZMUM), near Novgorod City, mixed forest on swamp, litter, VII.1988, all S.I. Golovatch leg.

REMARK. This Northern and Central European species, hygrophilous and mostly forest-dwelling, has previously been reported from Russia only from the Kaliningrad Region (Kime, Enghoff, 2017). The above records are formally new to the Pskov and Novgorod regions of Russia.

Leptoiulus proximus (Nemec, 1896)

MATERIAL. 1 ♀, 2 juv. (ZMUM), Russia, S of Pskov City, *Salix. Pinus, Betula* etc. forest, litter, 7.VII.1988, S.I. Golovatch leg.

REMARK. This Central to Eastern European species is very common across the Eastern European, or Russian, Plain, reaching the middle and lower Volga regions of Russia in the east: the Saratov, Ulyanovsk and Penza regions, as well as the Republic of Mordovia (Volkova, 2018).

Megaphyllum sjaelandicum (Meinert, 1868)

MATERIALS. 3 ♂♂, 4 ♀♀, 7 juv. (ZMUM), Russia, Novgorod Region, ca 7 km NE of Shimsk, swampy *Alnus, Betula, Populus tremula* etc. forest, litter, 11.VII.1988; 1 ♀, 12 juv. (ZMUM), Novgorod Region, SW of Oskuy ca 38 km NE of Chudovo, *Betula, Populus tremula, Pinus, Picea* etc. forest, litter, 12.VII.1988; 1 ♂, 3 ♀♀, 13 juv. (ZMUM), near Novgorod City, mixed forest on swamp, litter, VII.1988; 2 ♀♀, 5 juv. (ZMUM), S of Pskov City, *Pinus*, *Betula* etc. forest, litter, 7.VII.1988, all S.I. Golovatch leg.

REMARKS. This Northern, Central to Eastern European species, rather hygrophilous and mostly forest-dwelling (Kime, Enghoff, 2017), is wide-

spread across European Russia, ranging from the Kaliningrad and Vologda regions and Karelia in the west and north to the Belgorod and Saratov regions in the south, and the Ulyanovsk Region, Tatarstan Autonomous Republic and southern Urals in the east; also present in southwestern Siberia (Lokshina, 1969; Prisnyi, 2001; Volkova, 2018; Nefediev, 2018).

Ommatoiulus sabulosus (Linnaeus, 1758)

MATERIAL. 1 ♀ (ZMUM), Russia, Yaroslavl Region, Nekouz Distr., near Borok, N 58.0686°, E 38.2597°, 10.VIII.2021; 1 ♀ (ZMUM), same locality, near Borok Pond, under snow in forest, sifted litter, 26.III.2017, all I.S. Turbanov leg.; 1 juv. (ZMUM), Vologda Region, Verkhovazhye Distr., 1.5 km SE of Shelota, right bank of Vaga River, near Troitsky Spring, *Paludella squamosa* plot, extraction, 22.VII.2020; 1 ♀ (ZMUM), same locality, *Helodium blandowii* plot, extraction, 22.VII.2020, all A.S. Komarova, D.A. Filippov leg.; 1 ♀, 1 juv. (ZMUM), Pskov Region, Reshety between Ostrov and Novgorod, Sinyaya River delta, *Betula, Picea, Populus tremula* etc. forest, litter, 8.VII.1988; 1 ♀. 7 juv. (ZMUM), Novgorod Region, Krasnyi Bor ca 30 km SW of Kholm, *Alnus*, *Betula*, *Populus tremula* & *Pinus* forest, litter, 10.VII.1988; 2 ♂♂, 3 ♀♀ (ZMUM), near Novgorod City, mixed forest on swamp, litter, VII.1988; 2 ♀♀, 2 juv. (ZMUM), S of Pskov City, *Pinus*, *Betula* etc. forest, litter, 7.VII. 1988; 1 juv. (ZMUM), Mordovia Autonomous Republic, W of Zubova Polyana, *Betula* & *Pinus* forest, 27.VIII.1988; 1 juv. ♂, 1 ♀ (ZMUM), Bashkortostan Autonomous Republic, ca 150 km E of Sterlitamak, Sagaraya, Bashkirian Nature Reserve, 550–600 m, *Alnus* & *Betula* forest, litter, 11.VIII.1988, all S.I. Golovatch leg.

REMARKS. This very common and widespread, nearly pan-European species (Kime, Enghoff, 2017) ranges in Russia from Karelia, the Leningrad, Novgorod, Pskov, Vologda and Kirov regions in the north to the Tula Region in the south, and from the Kaliningrad Region in the west, through middle Volga regions, to Tatarstan, Bashkortostan and the Chelyabinsk Region (southern Urals) in the east (Lokshina, 1969; Golovatch, 2021).

Rossiulus kessleri (Lohmander, 1927)

MATERIAL. 5 ♂♂, 10 ♀♀ (ZMUM), Russia, Mari-El Autonomous Republic, Zvenigovo Distr., between Ilet' and Krasnogorsky, Ilet' River bank, *Picea* forest, 27.VII.1987, V.A. Matveev leg.

REMARKS. This common calciphilous species is subendemic to the Eastern European (= Russian) Plain, ranging from near Arkhangelsk, Vologda and Vyatka in the north to North Ossetia, Kalmykia and Dagestan, northern Caucasus in the south, and from near Minsk, central Belarus in the west to Bashkortostan and the Orenburg Region in the east (Kime, Enghoff, 2017).

Xestoiulus laeticollis mierzeyewskii Jawłowski, 1925

MATERIAL. 1 ♂, 4 ♀♀, 4 juv. (ZMUM), Pskov Region, Reshety between Ostrov and Novgorod, Sinyaya River delta, *Betula, Picea, Populus tremula* etc. forest, litter, 8.VII.1988; 3 ♀♀, 4 juv. (ZMUM), Russia, near Novgorod City, mixed forest on swamp, litter, VII.1988; 1 ♀, 1 juv. (ZMUM), Novgorod Region, Krasnyi Bor ca 30 km SW of Kholm, *Alnus*, *Betula*, *Populus tremula* & *Pinus* forest, litter, 10.VII.1988; 2 ♂♂, 7 ♀♀, 1 juv. (ZMUM), Russia, Novgorod Region, ca 7 km NE of Shimsk, swampy *Alnus*, *Betula*, *Populus tremula* etc. forest, litter, 11.VII.1988, all S.I. Golovatch leg.

REMARKS. This Central to Eastern European species/subspecies is highly hygrophilous, recorded from Russia from the Kaliningrad and Bryansk regions in the west and southwest, the Yaroslavl Region in the north, the Moscow Region in the east, and the Belgorod Region in the south (Lokshina, 1969; Prisnyi, 2001; Kime, Enghoff, 2017).

Order Polydesmida
Family Polydesmidae

Polydesmus complanatus (Linnaeus, 1761)

MATERIAL. 3 juv. (ZMUM), Russia, S of Pskov City, *Pinus*, *Betula* etc. forest, litter, 7.VII.1988; 3 juv. (ZMUM), Pskov Region, Reshety between Ostrov and Novgorod, Sinyaya River delta, *Betula, Picea, Populus tremula* etc. forest, litter, 8.VII.1988; 1 juv. (ZMUM), Russia, Novgorod Region, ca 7 km NE of Shimsk, swampy *Alnus*, *Betula*, *Populus tremula* etc. forest, litter, 11.VII.1988; 1 ♂ (ZMUM), Novgorod Region, SW of Oskuy ca 38 km NE of Chudovo, *Betula*, *Populus tremula*, *Pinus*, *Picea* etc. forest, litter, 12.VII.1988; 2 juv. (ZMUM), near Novgorod City, mixed forest litter, VII.1988, all S.I. Golovatch leg.

REMARKS. This common Central to Eastern European species (introduced to the Nearctic) is widespread across European Russia, mostly forest-dwelling, largely characteristic of natural habitats and ranging from the Kaliningrad Region and Karelia in the north and west to the Saratov Region and Bashkortostan in the east and southeast (Lokshina, 1969; Kime, Enghoff, 2011). Introduced to the town of Cherkessk, Karachay-Cherkess Republic, northern Caucasus (Zuev *et al*., 2023).

Polydesmus denticulatus C.L. Koch, 1847

MATERIAL. 1 ♀ (ZMUM), Russia, Yaroslavl Region, Nekouz Distr., near Borok, N 58.0686°, E

38.2597°, near Borok Pond, under snow in forest, sifted litter, 26.III.2017, I.S. Turbanov leg.; 1 juv. (ZMUM). Moscow Region, Shakhovskaya Distr., Burtsevo, Berlese extraction ex *Trametes hirsuta* fungus on a *Betula* tree, 1.XI.2021, O.L. Makarova leg.

REMARKS. This species is common throughout Europe, introduced to western Siberia and North America. In European Russia, it is very common in broadleaved forests and parklands south of the taiga belt, often synanthropic (Lokshina, 1969; Kime, Enghoff, 2011; Golovatch, 2021).

Polydesmus inconstans Latzel, 1884

MATERIAL. 2 juv. (ZMUM), Russia, Novgorod Region, Krasnyi Bor ca 30 km SW of Kholm, *Alnus, Betula, Populus tremula* & *Pinus* forest, litter, 10.VII.1988, S.I. Golovatch leg.

REMARKS. This common pan-European species (widely introduced to the Nearctic and western Siberia) is widespread across European Russia, inclined to dwelling in anthropogenic habitats and ranging from the Kaliningrad Region in the north and west to the Saratov Region and Bashkortostan in the east and southeast (Lokshina, 1969; Kime, Enghoff, 2011; Nefediev *et al*., 2016).

Acknowledgements. I am most grateful to all collectors who rendered me their material for study. I was partly supported by the Presidium of the Russian Academy of Sciences, Programme No. 41 "Biodiversity of natural systems and biological resources of Russia".

References

Golovatch S.I. 2021. New records of millipedes (Diplopoda) from European Russia and Abkhazia, Caucasus // Invertebrate Zoology. Vol.18. No.2. P.80–84.

Kime R.D., Enghoff H. 2011. Atlas of European millipedes (Class Diplopoda). Volume 1. Orders Polyxenida, Glomerida, Platydesmida, Siphonocryptida, Polyzoniida, Callipodida, Polydesmida // Fauna Europaea Evertebrata. No.3. Sofia–Moscow: Pensoft and Leiden: European Invertebrate Survey. 282 pp.

Kime R.D., Enghoff H. 2017. Atlas of European millipedes 2: Order Julida (Class Diplopoda) // European Journal of Taxonomy. Vol.346. P.1–299.

Kime R.D., Enghoff H. 2021. Atlas of European millipedes 3: Order Chordeumatida (Class Diplopoda) // European Journal of Taxonomy. Vol.769. P.1–244.

Lokshina I.E. 1969. [Identification book of millipedes Diplopoda of the plain territories of the USSR European part]. Moscow: Nauka. 78 pp. [In Russian]

Nefediev P.S., Kacourek P., Nefedieva J.S. 2016. The first record of *Polydesmus inconstans* Latzel, 1884 (Diplopoda: Polydesmida: Polydesmidae) in the Asian part of Russia // Arthropoda Selecta. Vol.25. No.1. P.19–21.

Nefediev P.S. 2018. New records of millipedes of the order Julida (Diplopoda) from Asian Russia and adjacent regions // Far Eastern Entomologist. No.370. P.12–20.

Prisnyi A.V. 2001. A review of the millipede fauna of the south of the Middle-Russian Upland, Russia (Diplopoda) // Arthropoda Selecta. Vol.10. No.4. P.297–305.

Short M., Vahtera V., Wesener T., Golovatch S.I. 2020. The millipede family Polyxenidae (Diplopoda, Polyxenida) in the faunas of the Crimean Peninsula and Caucasus, with notes on other European Polyxenidae // Zootaxa. Vol.4772. No.2. P.306–332.

Volkova J.S. 2018. [Species of myriapods (Myriapoda) new to the fauna of the lower Volga region] // Izvestiya Saratovskogo Universiteta, N.S. Seriya Khimiya, Biologiya, Ekologiya. T.18. No.2. P.182–184 [in Russian, with English abstract].

Zuev R.V., Proskura E.D., Evsyukov A.P. 2023. New records of millipedes (Diplopoda) from the Karachay-Cherkess Republic, northern Caucasus, Russia // Russian Entomological Journal. Vol.32. No.3. P.360–368.

Responsible editor K.G. Mikhailov