

Review of the study of woodlice (Crustacea: Isopoda: Oniscidea) in Belarus

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Abstract

The results of the study of woodlice biodiversity in Belarus are analyzed in the article. The total number of known species has reached 13, which belong to 7 families. In the future, we should expect the expansion of the species composition of this group of terrestrial invertebrates due to the finds of new species.

Introduction

Woodlice (Oniscidea) – one of the most important groups of terrestrial invertebrates. They act as important elements of food chains, participating in the biological cycle of terrestrial ecosystems and soil-forming processes (Borutzky, 1958). A feature of woodlice is a tendency to inhabit synanthropic sites, which makes them a common bioindicator and one of the most popular zoological objects in the study of urban ecosystems. Also, these invertebrates have the ability to accumulate heavy metals, and therefore are convenient test objects in environmental monitoring of the state of the environment (Bibič *et al.*, 1997; Paoletti & Hassall, 1999).

However, despite the scientific and practical significance of woodlice, no special work on the study of this group of terrestrial invertebrates has been carried out in Belarus before. Fragmentary information (most often woodlice were identified to family at best) can be found in the soil and zoological works carried out in different years on the territory of the Republic, as well as in the generalising article by Maximova (2005), where the presence of 4 species is given. At the same time, Kuznetsova & Gongalsky (2012) in the publication on the cartographic analysis of the woodlice fauna of the former USSR provide information about the habitat in the territory of our republic of 8 species, of which *Porcellio crassicornis* C. Koch, 1841 is currently considered a synonym of *Porcellium conspersum* C. Koch, 1841, that is, 7 species. Finally, the Fauna Europaea database (Boxshall, 2013) contains information about only one species – *Oniscus asellus* Linnaeus, 1758.

Results

As a result of research actively conducted in recent years in various regions of the country (Ostrovsky, 2019a; b; c; d; e; f; 2020; 2021a; b), the fauna of woodlice in Belarus has been enriched with 3 new species: *Armadillidium vulgare* (Latreille, 1804), *Hyloniscus riparius* (S. Koch, 1838) and *Porcellionides pruinosus* (Brandt, 1833). Another species – *A. pulchellum* (Zenker, 1798) – was discovered by the author of this article in August 2018 in the collection of Oleg Aleksandrowicz during a scientific internship at the Institute of Biology and Environmental Protection of the Pomeranian Academy in Slupsk (Poland) (Ostrovsky, 2019b) (Table 1).

Table 1: Systematic list of woodlice species (Oniscidea) of the fauna of Belarus

Species	Maximova (2005)	Kuznetsova & Gongalsky (2012)	Boxshall (2013)	Ostrovsky (2019a; b; c; d; e; f; 2020; 2012a; b)
Family Armadillidiidae Brandt, 1833 1) <i>Armadillidium pulchellum</i> (Zenker, 1798)				#
2) <i>Armadillidium vulgare</i> (Latreille, 1804)				#
Family Cylisticidae Verhoeff, 1949 3) <i>Cylisticus convexus</i> (De Geer, 1778)	#			#
Family Ligiidae Leach, 1814 4) <i>Ligidium hypnorum</i> Cuvier, 1792	#	#		
Family Oniscidae Latreille, 1802 5) <i>Oniscus asellus</i> Linnaeus, 1758			#	#
Family Porcellionidae Verhoeff, 1918 6) <i>Porcellio scaber</i> Latreille, 1804	#	#		#
7) <i>Porcellio spinicornis</i> Say, 1818		#		#
8) <i>Porcellionides pruinosus</i> (Brandt, 1833)				#
Family Trachelipodidae Strouhal, 1953 9) <i>Porcellium conspersum</i> C. Koch, 1841		#		
10) <i>Protracheoniscus orientalis</i> (Uljanin, 1875)		#		
11) <i>Trachelipus difficilis</i> Radu, 1950		#		
12) <i>Trachelipus rathkii</i> (Brandt, 1833)	#	#		#
Family Trichoniscidae Sars, 1899 13) <i>Hyloniscus riparius</i> (C. Koch, 1838)				#

Conclusions

Thus, collating the information available to date on the fauna of terrestrial isopods of Belarus, it is possible to guarantee with a certain degree of confidence that 13 species of woodlice from 7 families live on the territory of our country. At the same time, taking into account the registration of about 15 species of woodlice in the adjacent territories of neighbouring countries (Novitsky, 2013), in the future, we should expect an expansion of the species composition of this group of terrestrial invertebrates, for which it is planned to continue their further study.

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