

FOUR TERRESTRIAL ISOPOD SPECIES (ISOPODA: ONISCIDEA) NEW FOR LITHUANIAN FAUNA AND DATA ON DISTRIBUTION OF ANOTHER SEVEN SPECIES

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Introduction

Terrestrial isopods are one of the key groups of soil fauna, but their investigation in Lithuania does not have long tradition. Till now, 2 publications reported about Lithuanian woodlice. Kuznetsova & Gongalsky (2012) mentioned five species from Vilnius; Vilisics *et al.* (2012b) published data about seven species from different localities including huge research of Curonian Spit biotopes. Although Fauna Europaea database (Boxshall, 2013) contains 9 species of terrestrial isopods, this check-list is not based on known publications or collections and its presence in Lithuania should be evaluated as doubtful or anticipated.

We identified some terrestrial isopods from preserved material in collection of Laboratory of entomology (Nature Research Centre), as well as recently collected animals. Data about 11 species of terrestrial isopods, including four new species for Lithuanian fauna are reported in this paper. Known fauna of terrestrial isopods of Lithuania currently contains 12 species.

Material and Methods

The majority of terrestrial isopods were collected by P. Ivinskis (P.I.) and Jolanta Rimšaitė (J.R.) using Barber trap, Tulgren extractor, hand collection. Some woodlice were collected recently during Ivan H. Tuf's (I.H.T.) scholarship stay in Lithuania in October 2014. The specimens are deposited in collection of Nature Research Centre, Vilnius (P.I.). Taxonomical treatment follows Schmalzfuss (2003).

List of localities

Kaišiadorys district	Šešuva preserve 10 km E from Pravieniškės	54°56'16.3"N, 24°14'56.7"E;
Kaunas city	Ažuolynas (Oak) park	54°54'05.5"N, 23°56'57.9"E;
Kėdainiai district	Kėdainiai	55°20'26.1"N, 23°57'38.6"E;
Marijampolė district	Juodeliai	54°22'50.0"N, 23°06'40.2"E;
Palanga municipality	Būtingė, Lithuanian-Latvian border	56°04'12.4"N, 21°03'59.4"E;
Švenčionys district	Purvinas lake environs	55°01'52.1"N, 25°37'57.3"E;
Ukmergė district	Ukmergė	55°14'49.3"N, 24°45'46.1"E;

Vilnius city

Verkiai

54°44'48.9"N, 25°17'29.3"E.

Results

List of identified terrestrial isopods is reported. Species new for the Lithuanian fauna are marked with an asterisk (*).

ARMADILLIDIIDAE

Armadillidium pulchellum (Zenker, 1799)

Verkiai, 22 10 2009, 3 spec., trunk of *Tilia*, Tulgren extractor, 25 11 2009, 2 spec., Sphagnum bog, Tulgren extractor (P.I., J.R.).

**Armadillidium vulgare* (Latreille, 1804)

Juodeliai gravel pit, 29 50 2002, 2 spec., hand collection (P.I., J.R.).

LIGIIDAE

Ligidium hypnorum (Cuvier, 1792)

Purvinas, 01 06 2007, 20 spec., wet forest, pitfall traps, 03 07 2007, 42 spec., wet forest, pitfall traps, 24 08 2007, 12 spec., wet forest, pitfall traps (P.I., J.R.); Šešuva preserve 10 km E from Pravieniškės, 19 10 2014, 1 spec., mixed forest, hand collection (I.H.T., P.I., J.R.).

ONISCIDAE

Oniscus asellus Linnaeus, 1758

Verkiai, 13 10 2014, 10 spec., hand collection (I.H.T., P.I., J.R.).

PORCELLIONIDAE

Porcellio scaber Latreille, 1804

Ažuolynas (Oak) park, 15 10 2014, 14 spec., hand collection (I.H.T., P.I., J.R.); Ukmergė, 07 04 1973, 1 spec., hand collection (A. Stanionytė).

Porcellio spinicornis Say, 1818

Ažuolynas (Oak) park, 15 10 2014, 2 spec., hand collection (I.H.T., P.I., J.R.).

TRACHELIPODIDAE

Porcellium conspersum (Koch, 1841)

Purvinas, 24.08.2007, 3 spec., wet forest, pitfall traps (P.I., J.R.); Šešuvos preserve 10 km E from Pravieniškės, 19 10 2014, 1 spec., mixed forest, hand collection (I.H.T., P.I., J.R.).

Trachelipus rathkii (Brandt, 1833)

Ažuolynas (Oak) park, 15 10 2014, 4 spec., hand collection (I.H.T., P.I., J.R.); Būtingė, 08 10 2014, 6 spec., sea coast, under bark of *Salix*, hand collection (I.H.T., P.I., J.R.); Kėdainiai, 15 09 1988, 2 spec., hand collection (V. Strazdienė); Purvinas, 03 07 2007, 1 spec., wet forest, pitfall traps, 17 09 2007, 2 spec., wet forest, pitfall traps (P.I., J.R.), 01 06 2007, 40 spec., wet forest, pitfall traps, 24 08 2007, 9 spec., wet forest, pitfall traps (P.I.); Verkiai, 15.12.1974, 2 spec., trunk of *Pinus*, hand collection (Zolubas, Noreika), 13 10 2014, 2 spec., hand collection (I.H.T., P.I., J.R.).

TRICHONISCIDAE

**Haplophthalmus danicus* Budde-Lund, 1880

Verkiai, 13 10 2014, 4 spec., hand collection (I.H.T., P.I., J.R.).

**Hyloniscus riparius* (Koch, 1838)

Ažuolynas (Oak) park, 15 10 2014, 2 spec., hand collection (I.H.T., P.I., J.R.); Verkiai, 13 10 2014, 3 spec., hand collection (I.H.T., P.I., J.R.).

****Trichoniscus pusillus* Brandt, 1833**

Ąžuolynas (Oak) park, 15 10 2014, 9 spec., hand collection (I.H.T., P.I., J.R.); Šešuvos preserve 10 km E from Pravieniškės, 19 10 2014, 2 spec., hand collection (I.H.T., P.I., J.R.); Verkiiai, 13 10 2014, 6 spec., hand collection (I.H.T., P.I., J.R.).

Discussion

Recently, five species were reported for Vilnius by Kuznetsova & Gongalsky (2012): *A. pulchellum*, *O. asellus*, *P. scaber*, *P. spinicornis* and *T. rathkii*. In the same year, Vilisics *et al.* (2012b) published distribution of seven species in Lithuania: *Cylisticus convexus* (De Geer, 1778) of family Cylisticidae, *O. asellus*, *T. rathkii*, *P. scaber*, *P. spinicornis*, *P. conspersum*, *L. hypnorum*.

Our investigation confirmed presence of *A. pulchellum* in Vilnius Verkiiai park with old trees. *A. vulgare*, newly reported for Lithuania, is a widespread common species (Tropek *et al.*, 2009, Schmalfuss, 2003) with rather synanthropic distribution in Eastern Europe (Štrichelová & Tuf, 2012). Its presence in Lithuania was anticipated based on Fauna Europaea (Boxshall, 2013) too.

All three species of family Trichoniscidae are soil dwelling minute species. They are rather rarely trapped by pitfall traps as they inhabit upper soil layers (Tuf, 2002). *H. riparius* is widely distributed in both anthropic as well as natural biotopes (Riedel *et al.*, 2009, Štrichelová & Tuf, 2012, Vilisics *et al.*, 2012a). *T. pusillus* is also a widespread and abundant European species (Schmalfuss, 2003) well known from city parks too (Riedel *et al.*, 2009). Both species are frequent in moss cushions on soil surface as well as on tree trunks (Božanić *et al.*, 2013). *H. danicus* is a European species known also from Scandinavia (described from Denmark), distributed in several European cities (Riedel *et al.*, 2009, Vilisics *et al.*, 2012a). All three species were found in Verkiiai park in Vilnius, two of them also in Kaunas, during short-term sampling. Because of relatively low sampling activity, we can presume all three species are widely distributed in Lithuania and can be recorded by individual hand collecting on soil surface, under logs and stones and under the bark.

Till now, 12 species of woodlice were recorded in fauna of Lithuania, but we suppose there are other species yet to be recorded. Such methods as direct searching, litter sieving and hand-sorting or heat extracting of soil samples should be applied for better knowledge of those interesting soil invertebrates.

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Duomenys apie keturias naujas ir kitas septynias Lietuvos faunos vėdarėlių (Isopoda: Oniscidea) rūšis

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Santrauka

Pateikiamas 11 Lietuvoje sutinkamų vėdarėlių (Isopoda: Oniscidea) rūšių sąrašas, nurodant jų radavietes ir būdingas buveines bei sugavimo būdus, straipsnyje pateikti duomenys apie keturias naujas Lietuvos faunai rūšis.

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