

SEVERAL NEW FOR THE LITHUANIAN FAUNA SPECIES OF SPIDERS (ARANEAE)

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Introduction

Investigation of spider fauna in Lithuania does not have long tradition. Till now 445 spider species from 29 families are known in Lithuania (Bitienikytė & Relys, 2011). The first list of Lithuanian spiders was published in 1992 (Vilkas, 1992), then several new species added (Relys 1994, Relys 2000). Using nowadays methods of collecting spiders some new species for Lithuania were collected. We identified some spiders from the material in the collection of Laboratory of entomology (Nature Research Centre), as well as recently collected material. Data on 14 new species and one new spider family for Lithuanian spider fauna is reported in this paper.

Material and Methods

The material was collected during field research in different districts of Lithuania. Spiders were collected by pitfall traps, hand collection, window traps and Malaise traps. The same investigation plots in Curonian Spit, their names and numeration were used since 2008 (from plot 0 to plot 10 in different habitats in Curonian Spit; numeration in Juodkrantė cormorant colony is from 3a (the most recent used part) to 3d (oldest part of the colony)), therefore their numeration is given in locality data as well. The material is deposited in author's collections and in the collection of the Laboratory of entomology, Nature Research Centre. Several abbreviations are used in the text, namely: (O.M) – Ondřej Machač, (J.R.) – Jolanta Rimšaitė, (P.I.) – Povilas Ivinskis, coll. – collection, (juv.) – juvenile. Spiders were identified by O.M.

List of localities

Alksnynė (1), burned and cut forest (plot 0)	Neringa mun.	55.643277, 21.126361
Alksnynė (2), burned forest (plot 1)	Neringa mun.	55.642861, 21.123194
Alksnynė (3), <i>Pinus sylvestris</i> forest (plot 2)	Neringa mun.	55.643027, 21.117027
Alksnynė (4), <i>Pinus mugo</i> forest (plot 10)	Neringa mun.	55.642222, 21.122750
Juodkrantė (1)	Neringa mun.	55.523194, 21.116386
Juodkrantė (2), old forest (plot 10)	Neringa mun.	55.523561, 21.113527
Juodkrantė (3), Great cormorant colony, south edge (plot 3a)	Neringa mun.	55.517805, 21.111527
Juodkrantė (4), Great cormorant colony, centre (plot 3c)	Neringa mun.	55.518972, 21.111500

Juodkrantė (5), old part of cormorant colony (plot 3d)	Neringa mun.	55.520416, 21.112055
Juodkrantė (6), Great cormorant colony, south edge (plot 3b)	Neringa mun.	55.518029, 21.111972
Nagliai nature reserve (1), grey dune (plot 4)	Neringa mun.	55.437916, 21.076194
Nagliai nature reserve (2), grey dune (plot 5)	Neringa mun.	55.437166, 21.076472
Nagliai nature reserve (3), alder forest (plot 6)	Neringa mun.	55.437111, 21.074194
Nagliai nature reserve (4), white dune (plot 7)	Neringa mun.	55.436388, 21.081138
Nagliai nature reserve (5), white dune (plot 8)	Neringa mun.	55.435805, 21.081861
Puziniškis	Ignalina district	55.353836, 26.030541
Labanoras RP, Minelis lake	Švenčionys district	55.241811, 25.744655
Trakai, old gravel pit	Trakai district	54.627222, 24.985638
Kalniškės	Vilnius district	54.846666, 25.177222
Karmazinai	Vilnius district	54.817544, 24.929247
Verkšionys	Vilnius district	54.795872, 24.910452
Kairėnai	Vilnius mun.	54.733883, 25.407358

List of species

CLUBIONIDAE

Clubiona terrestris Westring, 1851

Juodkrantė (5), cormorant colony, 12–26 08 2013, 2 ♀, window trap; 19 05–02 06 2014, 1 ♂ (M.T.); 08 05–22 05 2014, 1 ♂; 17 06–01 07 2013, 2 ♀, window trap; 03 09–20 10 2012, 1 ♀, pitfall trap (P.I. & J.R., coll. O.M.).

LINYPHIIDAE

Allomengea vidua (L. Koch, 1879)

Juodkrantė (2), 13–2008 2013, 1 ♂, pitfall trap (P.I. & J.R., coll. O.M.).

Leptothrix hardyi (Blackwall, 1850)

Alksnynė (1), 15–30 10 2012, 4 ♂; Alksnynė (2), 28 07–11 08 2008, 1 ♀; 20 10–11 11 2014, 1 ♂; Juodkrantė (2), 28 07–11 08 2008, 1 ♂; 15–29 07 2013, 4 ♂, 4 ♀; Nagliai reserve (1), 08 09–21 09 2008, 5 ♂ 1 ♀; 06–21 10 2008, 13 ♂, 7 ♀; 10–24 08 2009, 6 ♂, 6 ♀, 24 08–07 09 2009, 4 ♂, 1 ♀; 21 09–05 10 2009, 5 ♂, 05–26 10 2009, 12 ♂, 8 ♀; Nagliai reserve (2), 10–24 08 2009, 1 ♂; 05 10–26 10 2009, 10 ♂, 2 ♀; 07 10 2013–20 10 2014, 8 ♂, 2 ♀; Nagliai reserve (3), 17 09–01 10 2012, 2 ♂; 22 09–06 10 2014, 1 ♀; Nagliai reserve (4), 15–30 10 2014, 16 ♂, 4 ♀; Nagliai reserve (5), 08–21 09 2009, 3 ♀; 07 10 2013–11 11 2014, 5 ♂, 4 ♀ pitfall traps (P.I. & J.R., coll. O.M.); Trakai, 09 10–02 11 2015, 4 ♂, 2 ♀; 06 11–02 12 2015, 1 ♂, pitfall traps (P.I. & J.R., coll. O.M.); Verkšionys gravel, 21 09–02 12 2015, 23 ♂, 9 ♀, pitfall traps (P.I. & J.R., coll. O.M.).

Lepthyphantes minutus (Blackwall, 1833)

Juodkrantė (2), 21 09–05 10 2009, 1 ♂; Juodkrantė (3), cormorant colony, 23 09–07 10 2013, 1 ♂, 1 ♀; Juodkrantė (4), cormorant colony, 09 09–21 10 2013, 3 ♂; Juokrantė (5), cormorant colony, 03 09 2012–11 11 2014, 4 ♂, 5 ♀; Nagliai reserve (3), 09–23 10 2013, 1 ♀, pitfall traps; Kalniškės, 8–15 11 2015, 1 ♂, 1 ♀, widow trap, on edge of forest (P.I., coll. O.M.); Karmazinai, 23 08 2003, 1 ♂ (P.I. & J.R., coll. O.M.).

***Linyphia hortensis* Sundevall, 1830**

Juodkrantė (1), 12 06 2012, 1 ♀; Juodkrantė (2), 01–18 05 2009, 1 ♂; Juodkrantė (3), cormorant colony, 28 04–02 06 2014, 4 ♂, 2 ♀, Juodkrantė (6), cormorant colony, 20 05 2013–02 06 2014, 5 ♂, 1 ♀; Juodkrantė (5), old cormorant colony, 06–20 05 2013, 1 ♀, pitfall traps (P.I. & J.R., coll. O.M.).

***Moebelia penicillata* (Westring, 1851)**

Juodkrantė (1), 16 06 2016, 2 ♂, 1 ♀, on tree trunks on edge of pine forest. (coll. O.M.).

***Trematocephalus cristatus* (Wider, 1834)**

Kalniškės, 22–29 05 2016, 1 ♀ (P.I., coll. O.M.); Puziniškis, 14 05 2016, 2 ♂ (coll. O.M.).

LYCOSIDAE

***Pardosa saltans* Töpfer-Hofmann 2000**

Alksnynė (1), 15–29 07 2013, 1 ♀; Juodkrantė (2), 01–18 05 2009, 4 ♂; 28 04–02 06 2014 3 ♂; Juodkrantė (3), cormorant colony, 20 05 2013–02 06 2014, 33 ♂, 13 ♀; Juodkrantė (6), cormorant colony, 11 06 2012–02 06 2014, 61 ♂, 14 ♀; Juodkrantė (4), cormorant colony, 11 06 2012–02 06 2014, 10 ♂, 9 ♀; Juodkrantė (5), cormorant colony, 06 05 2013–28 07 2014, 40 ♂, 19 ♀; Nagliai reserve (1), 12–26 08 2013, 5 ♂, 14 ♀; Nagliai reserve (6), 06–20 05 2013, 3 ♂; 02–16 06 2008, 4 ♂, pitfall traps; Trakai, old gravel, 08–22 06 2015, 18 ♂, 7 ♀, pitfall traps (P.I. & J.R., coll. O.M.).

PHILODROMIDAE

***Philodromus dispar* Walckenaer, 1826**

Juodkrantė (3), cormorant colony, 03–17 06 2013, 1 ♂, pitfall traps; Kalniškės, 31 05–07 06 2016, 2 ♂ 1 ♀, window trap on tree trunk, edge of forest; Trakai, old gravel 25 05–08 06 2016 1 ♂, pitfall traps (P.I. & J.R., coll. O.M.).

***Philodromus fallax* Sundevall, 1833**

Alksnynė (1), 02 05–03 06 2013, 1 (juv.); Alksnynė (3) 06–20 10 2014, 2 (juv.); Alksnynė (4), 10–26 05 2009, 1 (juv.); Juodkrantė (2), 15–29 07 2014, 1 ♀; Nagliai reserve (4), 05–19 05 2008, 9 (juv.); 02–16 08 2008, 1 (juv.); 11–25 08 2008, 5 (juv.); 29 04–19 05 2009, 1 ♂, 4 ♀; 15 06 2009, 1 ♀; 27 07–10 08 2009, 1 (juv.); 10–24 08 2009, 1(juv.); 08–21 09 2009, 5 (juv.); 21 09–10 10 2009, 3 (juv.); 15 10 2012–19 05 2014, 11 (juv.); Nagliai reserve (5), 28 07–08 08 2008, 5 (juv.); 25 08 2008, 1 ♂, 4 (juv.); 08 08–22 09 2008, 2 (juv.); 21 04–10 05 2009, 3 ♂, 3 (juv.); 10 05–26 10 2009, 1 (juv.); 10 05 2012–22 10 2014, 3 ♂, 11 ♀, 20 (juv.), pitfall traps (P.I. & J.R., coll. O.M.).

SALTICIDAE

***Heliophanus lineiventris* Simon, 1868**

Nagliai reserve (4), 13 05–04 06 2014, 1 ♀ (P.I. & J.R., coll. O.M.).

THERIDIIDAE

***Parasteatoda tepidariorum* (C. L. Koch, 1841)**

Vilnius, Botanical garden, 21 05 2016, 2 ♀, in greenhouse, hand collecting (O.M. & P.I., coll. O.M.).

THERIDIOSOMATIDAE

***Theridiosoma gemmosum* (L. Koch, 1877)**

Labanoras, Minelis lake bank, 06 06 2016, 1 (juv.) and 1 egg sac, in wetland vegetation, hand collecting (coll. O.M.).

THOMISIDAE

***Xysticus striatipes* L. Koch, 1870**

Trakai, old gravel excavation, 08 05–17 06 2016, 2 ♀, on vegetation in old sandpit, sweeping (coll. O.M.).

Discussion

Data about 14 species of spiders new for the Lithuanian fauna are presented. All of these species, belonging to 8 families, were expected to be found in Lithuania (Biteniekytė & Rėlys, 2011).

Clubiona terrestris is a common and widely distributed European species of sac spiders. This species is known from Poland (Stanska *et al.* 2000) and Belarus (Ivanov, 2013), from Baltic region it is known from Estonia (Mikhailov, 2003). This species lives on leaf litter or on bushes in various forest habitats.

Allomengea vidua is a relatively rare spider in dump habitats, mainly wetlands and reeds. Widely distributed in Europe, known from all neighbouring countries (Ivanov, 2013; Rėlys & Spun̄gis 2003; Stanska *et al.*, 2000).

Leptothrix hardyi is a rare species distributed mainly in north and west part of Europe. This species lives on leaf litter in various open and forest habitats. Known from all neighbouring countries. In Baltic region it lives on dunes (Cera & Spun̄gis, 2008).

Leptyphantus minutus is a common European species, lives mainly in coniferous forests on tree trunks and in leaf litter. Known from Poland (Stanska *et al.*, 2000), in Baltic region from Estonia (Mikhailov, 2013).

Linyphia hortensis is a common species that lives on low bushes all around Europe.

Moebelia penicillata is a common species that lives under the bark on tree trunks, widely distributed (Nentwig *et al.*, 2016).

Trematocephalus cristatus is a common species that lives on trees and bushes in various habitats. Widely distributed across Europe. Known from all neighbouring countries.

Wolf spider *Pardosa saltans* is a rather recently described species (Töpfer-Hofmann *et al.*, 2000), very similar species to a common *P. lugubris*. This species is widely distributed mainly in the west, central and north part of Europe. *P. saltans* lives in various light woods, mainly in lowlands.

Philodromus dispar is not frequent but widely distributed around all Europe. Known from all neighbouring countries. Lives on bushes and vegetation on sunny wood edges.

Philodromus fallax is a typical species for sand dunes and sandy habitats on sea shore, this species is very hard to find, because it is cryptically colored (Szita & Logunov, 2008). Known from all neighbouring countries.

Heliophanus lineiventris is a rare jumping spider that lives in dry steppe habitats. From Baltic region it is known from Estonia (Weselovska, 1986).

Parasteatoda tepidariorum is an alien species in Europe (Nentwig & Kobelt, 2010), native to South America. This species lives only inside buildings and on their walls.

Theridiosoma gemmosum is the single species from the family Theridiosomatidae in Europe. This small spider lives among vegetation in wetlands. Rarely found, but widely distributed. *T. gemmosum* makes a typical ball cocoon on spider thread (Hajer *et al.*, 2009).

Xysticus striatipes is a frequent species, it lives among low vegetation in dry and

sunny habitats. Widely distributed in Europe except the northern part (Blick *et al.*, 2004). Lithuanian record is one of the northernmost of this species in Europe.

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References

- Bitenikytė M., Rėlys V. 2011. The checklist of Lithuanian spiders (Arachnida: Araneae). *Biologija* 57 (4): 148–158.
- Blick T., Bosmans R., Buchar J., Gajdoš P., Hänggi A., Van Helsdingen P., Růžička V., Staręga W., Thaler K. 2004. Checkliste der Spinnen Mitteleuropas. Checklist of the spiders of Central Europe. (Arachnida: Araneae). Available at http://www.arages.de/checklist.html#2004_Araneae (Accessed November 6, 2016)
- Cera I., Spunģis V. 2008. Spider (Araneae) species new to the Fauna of Latvia. *Latvias Entomologs* 45: 49.
- Hajer J., Malý J., Hrubá L., Reháková D. 2000. Egg sac silk of *Theridiosoma gemmosum*. *Journal of Morphology* 270: 1269–1283.
- Mikhailov G. K. 2003. The spider genus *Clubiona* Latreille, 1804 (Aranei: Clubionidae) in the fauna of the former USSR: 2003 update. *Arthropoda Selecta* 11: 283–317.
- Mikhailov G. K. 2013. The spiders (Arachnida: Aranei) of Russia and adjacent countries: A non-annotated checklist. *Arthropoda Selecta. Supplement No. 3*. Moscow: KMK Scientific Press Ltd. 262 p.
- Nentwig W., Blick T., Gloor D., Hänggi A., Kropf C. 2016. *Spiders of Europe*. Available at www.araneae.unibe.ch (Accessed November 6, 2016).
- Nentwig W., Kobelt M. 2010. Spiders (Araneae). Chapter 7.3. In: Roques A. et al. (Eds) Alien terrestrial arthropods of Europe. *BioRisk* 4 (1): 131–147.
- Rėlys V. 1994. Unkommentierte Liste der Spinnen Litauens (Araneae). *Arachnologische Mitteilungen* 7: 1–19.
- Rėlys V. 2000. Contribution to the knowledge of the spider (Araneae, Arachnida) fauna of Lithuania. *Acta Zoologica Lituanica* 10 (2): 47–53.
- Rėlys V., Spunģis V. 2003. Checklist of spiders (Arachnida, Araneae) of Latvia, Available at <http://leb.daba.lv/Aranea.htm> (Accessed November 6, 2016).
- Stańska M., Hajdamowicz I., Żabka M. 2000. Epigeic spiders of alder swamp forests in Eastern Poland. Proceedings of the 19th European Colloquium of Arachnology, Aarhus 17–22 July 2002: 191–197.
- Szita É., Logunov D. 2008. A review of the *histrion* group of the spider genus *Philodromus* Walckenaer, 1826 (Araneae, Philodromidae) of the eastern Palaearctic region. *Acta Zoologica Academiae Scientiarum Hungaricae* 54: 23–73.
- Töpfer-Hofmann G., Cordes D., von Helversen O. 2000. Cryptic species and behavioural isolation in the *Pardosa lugubris* group (Araneae, Lycosidae), with description of

- two new species. *Bulletin of the British Arachnological Society* 11 (7): 257–274.
- Vilkas A. 1992. The check-list of spiders (Arachnida, Araneae) of Lithuania. In Jonaitis V. (ed.) *New and Rare for Lithuania Insect Species. Records and Descriptions of 1992*. Vilnius, 101–112.
- Vilkas A. 2009. New and rare for the Lithuanian fauna species of spiders registered in 2007–2009. *New and Rare for Lithuania Insect Species* 21: 101–115.
- Weselovska W. 1986. A revision of the genus *Heliophanus* C. L. Koch, 1833 (Aranei: Salticidae). *Annales zoologici, Warsaw* 40: 1–254.

Keletas naujų Lietuvos faunos vorų (Aranea) rūšių

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Pateikiami duomenys apie 14 naujų Lietuvai vorų rūšių, priklausančių 8 šeimoms. Didžioji dalis naujai rastų rūšių yra plačiai paplitusios ir dažnos Europoje. Rūšys *Allomonga vidua*, *Leptothrix hardyi*, *Pardosa saltans*, *Heliophanes niveirostris*, *Teridiosoma gemmosum* yra retos, o *Parasteatoda tepidariorum* yra svetimžemė rūšis, kurios tėvynė - Pietų Amerika.

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