

ЗООЛОГІЯ

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SPIDERS (ARACHNIDA: ARANEI) OF FIVE FOREST HABITATS OF THE POLISSYA NATURE RESERVE (ZHYTOMYR AREA, UKRAINE)

*The Polissya Nature Reserve is located in the zone of mixed forests in the physical-geographic region of Zhytomyr Polissya (Zhytomyr region, Ukraine). The first data on the spiders of the reserve were obtained by Guryanova V. She gave a list of 66 species from five forest and one swamp coenoses of the Perga forestry. Later, K. Evtushenko and L. Kobzar in an abstract reported on the discovery of 51 species from 14 families from five forest coenoses of the Selezivka Forestry. The list of spiders of the reserve was supplemented by 21 species. Currently, a list of all detected species and their coenotic distribution is provided. The data were obtained on the material collected by the method of soil traps in a pine lichen forest, pine green moss forest, pine-birch blueberry forest, pine-birch molinia forest and birch-oak-elm forest. The material consisted of 866 adult specimens of spiders. Most of the detected species live on the surface of the soil or in the litter. These are common forest species that prefer moist and shaded conditions. Only a few species are rare for Ukrainian Polissya: *Arctosa lutetiana* (Simon, 1876) (known from the Shatsk National Nature Park), *Mustelicoso dimidiata* (Thorell, 1875) (recorded in the v. Kozyn near Kyiv) and *Zora* sp. 1 and *Zora* sp. 2 – not identified to species close to *Z. manicata* Simon, 1878. The total list of spiders of the Polissya Nature Reserve consisted of 87 species from 17 families. Infection of spiders of the Liocranidae family with larvae of the fly *Ogcodes* sp. (Diptera: Acroceridae) was recorded for the first time. Two females of the spider *Agroeca proxima* (O. P.-Cambridge, 1871) were infected. Females were collected in pine lichen forest and birch-oak-elm forest. Larvae are localized inside the abdomen of spiders near the epigastric slit. The article contains photos of the location of the fly larvae inside the spider and the appearance of the larvae.*

Key words: spiders, Polissya Nature Reserve, Ukraine.

Introduction. The Polissya Nature Reserve is located in the zone of mixed forests in the north of the Zhytomyr Polissya physical-geographic region (Zhytomyr Region, Ukraine) (Map 1). The first data on the spiders of the Polissya Nature Reserve were obtained by Guryanova V. [1]. She gave a list of 66 species of spiders found in six habitats on the territory of the Perga Forestry. Later, Evtushenko K. and Kobzar L. [2] reported in abstract on the distribution of 51 species identified in five habitats of the Selezivka Forestry. In this article, we provide a list of these species, habitat description and photographs of the location of *Ogcodes* fly larvae (Diptera: Acroceridae) in the body of *Agroeca* spiders.

Material and methods.

The material collected by L. Kobzar from June to October 2011 by soil trap method in five forest habitats amounted to 866 specimens determined to species (Map 1).



Map 1. Location of the Polissya Nature Reserve

Habitat description.

1. Pine lichen forest (N 51°32.319', E 028°06.102'). Pine trees are 50–60 years old. The completeness of the plantation 0,4-0,5. Undergrowth is absent. Grass cover: common goldenrod, dry-loving grasses. Lichen cover 90%. Litter: dry needles. Located on a hillside. Sandy soils.

2. Pine green moss forest (N 51°32.244', E 028°06.120'). Pine trees are 50-60 years old. The completeness of the plantation 0,8 Undergrowth is absent. Grass cover: single dry-loving herbs. Green moss cover 90%. Litter: rotted moss and needles. Sandy soils.

3. Pine-birch blueberry forest (N 51°32.339', E 028°05.906'). Moist middle-aged forest. Planting composition 7P 3B. The completeness of the plantation 0,7. Undergrowth is absent. Grass cover: blueberry prevails, ledum and green moss are present. Litter: rotten birch leaves and pine needles. Sod-podzolic soil.

4. Pine-birch molinia forest (N 51°32.040', E 028°05.874'). Moist middle-aged forest. Planting composition 5P 5B. The completeness of the plantation 0,7. Undergrowth: frangula bushes. Grass cover: molinia prevails, blueberry and green moss are present. Litter: rotten birch leaves and pine needles. Sod-podzolic soil.

5. Birch-oak-elm forest (N 51°32.299', E 028°06.151'). Deciduous forest near the Bolotnytsia River. Undergrowth: numerous buckthorn bushes. Litter: rotten birch, oak, elm and buckthorn leaves. The humus horizon is clearly expressed. The soil is sod-medium-podzolic.

Three larvae of the *Ogcodes* sp. (Acroceridae) were found in two females of *Agroeca proxima* (O. P.-Cambridge, 1871) (Liocranidae). Material: 1f, 03.10.2011, pine lichen forest; 1f, 24.08.2011, birch-oak-elm forest. The larvae were located near the epigastric slit. They were extracted and photographed.

Results. Fifty-one species from 14 families were identified (Table 1). Twenty-one species were registered in the Polissya Nature Reserve for the first time.

Table 1

List of species and number of individuals

List of species	Pine lichen forest	Pine green moss forest	Pine-birch blueberry forest	Pine-birch molinia forest	Birch-oak-elm forest
1	2	3	4	5	6
1. Agelenidae					
1. <i>Agelena labyrinthica</i> (Clerck, 1757)	2	3	1	1	1
2. Araneidae					
2. <i>Cercidia prominens</i> (Westring, 1851)				2	
3. Cheiracanthiidae					
3. <i>Cheiracanthium virescens</i> (Sundevall, 1833)	2				
4. Gnaphosidae					
4. <i>Berlandina cinerea</i> (Menge, 1872)	2				

Continuation of Table 1

1	2	3	4	5	6
5. <i>Drassodes pubescens</i> (Thorell, 1856)			1		1
6. <i>Drassyllus lutetianus</i> (L. Koch, 1866)					
7. <i>Drassyllus praeficus</i> (L. Koch, 1866)		1			1
8. <i>Haplodrassus cognatus</i> (Westring, 1861)		2		1	
9. <i>Haplodrassus signifer</i> (C.L. Koch, 1839)		14	1	3	3
10. <i>Haplodrassus silvestris</i> (Blackwall, 1833)		1	6	2	6
11. <i>Haplodrassus umbratilis</i> (L. Koch, 1866)			2	1	1
12. <i>Micaria fulgens</i> (Walckenaer, 1802)					2
13. <i>Zelotes clivicola</i> (L. Koch, 1870)	2	13	4	2	
14. <i>Zelotes electus</i> (C. L. Koch, 1839)	1				
15. <i>Zelotes exiguus</i> (Müller & Schenkel, 1895)		1		2	
16. <i>Zelotes longipes</i> (L. Koch, 1866)	1				
17. <i>Zelotes subterraneus</i> (C.L. Koch, 1833)	1	25	24	3	3
5. Linyphiidae					
18. <i>Diplostyla concolor</i> (Wider, 1834)				1	
19. <i>Neriere radiata</i> (Walckenaer, 1841)		1			
20. <i>Tenuiphantes flavipes</i> (Blackwall, 1854)		1			
21. <i>Tenuiphantes mengei</i> (Kulczyński, 1887)				1	
22. <i>Walckenaeria unicornis</i> O. P.-Cambridge 1861		1			
6. Liocranidae					
23. <i>Agroeca brunnea</i> (Blackwall, 1833)			2		
24. <i>Agroeca proxima</i> (O. P.-Cambridge, 1871)		10	32	49	2
7. Lycosidae					
25. <i>Alopecosa aculeata</i> (Clerck, 1757)	1	27	2	2	1
26. <i>Alopecosa pulverulenta</i> (Clerck, 1757)					1
27. <i>Arctosa lutetiana</i> (Simon, 1876)			1		
28. <i>Hygrolycosa rubrofasciata</i> (Ohlert, 1865)		4	1	12	
29. <i>Mustelicosa dimidiata</i> (Thorell, 1875)	1				
30. <i>Pardosa lugubris</i> (Walckenaer, 1802)	4	13	30	21	56
31. <i>Pardosa prativaga</i> (L. Koch, 1870)					1
32. <i>Piratula hygrophila</i> (Thorell, 1872)				4	
33. <i>Piratula latitans</i> (Blackwall, 1841)				1	
34. <i>Piratula uliginosa</i> (Thorell, 1856)		2	3	5	
35. <i>Trochosa terricola</i> Thorell, 1856		109	54	74	110
36. <i>Xerolycosa miniata</i> (C. L. Koch, 1834)	3				4
37. <i>Xerolycosa nemoralis</i> (Westring, 1861)					1
8. Miturgidae					
38. <i>Zora silvestris</i> Kulczyński, 1897		3	8	1	
39. <i>Zora spinimana</i> (Sundevall, 1833)	2		1	2	
40. <i>Zora</i> sp.1		3			1
41. <i>Zora</i> sp.2	1				
9. Pisauridae					
42. <i>Dolomedes fimbriatus</i> (Clerck, 1757)		1		1	
10. Philodromidae					
43. <i>Philodromus fuscomarginatus</i> (De Geer, 1778)		3			
44. <i>Thanatus sabulosus</i> (Menge, 1875)					3
11. Phrurolithidae					
45. <i>Phrurolithus festivus</i> (C. L. Koch, 1835)					1
12. Salticidae					
46. <i>Euophrys frontalis</i> (Walckenaer, 1802)			1		
47. <i>Evarcha falcata</i> (Clerck, 1757)		1			
13. Theridiidae					
48. <i>Crustulina guttata</i> (Wider, 1834)			3		
49. <i>Euryopis flavomaculata</i> (C. L. Koch, 1836)		1	2	2	
14. Thomisidae					
50. <i>Xysticus luctator</i> L. Koch, 1870		1	4		13
51. <i>Xysticus luctuosus</i> (Blackwall, 1836)		1			12
Total number of individuals	23	242	183	193	224
Total number of species	13	25	21	23	21

Spiders of the family Liocranidae were noted as hosts of *Ogcodes* flies for the first time (Figure 1).



Figure 1. Larvae of *Ogcodes* sp. within *Agroeca proxima*

Discussion. Most of the detected species of spiders live on the surface of the soil or in the litter. These are common forest species that prefer moist and shaded conditions. Only a few species are considered rare for Ukrainian Polissya:

Arctosa lutetiana (Simon, 1876) – found in Shatsk National Nature Park [3], inhabits mixed forests.

Mustelicosa dimidiata (Thorell, 1875) – found in Kyiv: Kozyn [4], inhabits dry pine forests.

Zora sp. 1 – Material: 2m, 05.06.2011, 1m, 02.07.2011, green mossy pine forest; 1m, 20.06.2011, birch-oak-elm forest. The species is close to *Z. manicata* Simon, 1878.

Zora sp. 2 – Material: 1f, 02.07.2011, lichen pine forest. The species is close to *Z. manicata* Simon, 1878. Perhaps this is a female *Zora* sp. 1.

Conclusions. The total list of Polissya Nature Reserve spiders includes 87 species, taking into account the species given by V. Guryanova [1].

The finds of rare Polissya species indicates the presence of environmental conditions specific to other areas of Polissya. This suggests that other rare species may be detected through the use of traps throughout the warm period, while simultaneously using other methods of collecting spiders covering grass and trees.

It is important to carry out dipterological research on the territory of the reserve in order to collect and identify the fly *Ogcodes* sp., which will be a new species for the Polissya fauna.

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ПАВУКИ (ARACHNIDA: ARANEI) П'ЯТИ ЛІСОВИХ БІОТОПІВ ПОЛІСЬКОГО ПРИРОДНОГО ЗАПОВІДНИКА (ЖИТОМИРСЬКА ОБЛАСТЬ, УКРАЇНА)

*Поліський природний заповідник розташований в зоні мішаних лісів у фізико-географічній області Житомирське Полісся (Житомирська область, Україна). Перші дані про павуків заповідника були отримані В. Гур'яною. Вона навела список 66 видів з п'яти лісових і одного болотного ценозів Перганського лісництва. Пізніше К. Євтушенко та Л. Кобзар повідомили про виявлення 51 виду з 14 родин в п'яти лісових ценозах Селезівського лісництва. Список павуків заповідника був поповнений 21 видом. Наразі надається список всіх виявлених видів та їх ценотичний розподіл. Дані були отримані на матеріалі, зібраному методом ґрунтових пасток у сосновому лісі лишайниковому, сосновому лісі зеленомоховому, сосново-березовому чорничному лісі, сосново-березовому молінієвому лісі та березово-дубово-в'язовому лісі. Матеріал становив 866 статевозрілих екземплярів павуків. Більшість виявлених видів мешкають на поверхні ґрунту або в підстилці. Це звичайні лісові види, які віддають перевагу вологим і затіненим умовам. Лише кілька видів є рідкісні для українського Полісся: *Arctosa lutetiana* (Simon, 1876) (відомий з Шацького національного природного парку, *Mustelicoso dimidiata* (Thorell, 1875) (відмічений в с. Козин біля Києва) та *Zora* sp. 1 і *Zora* sp. 2., які вірогідно представники одного виду, близького до *Z. tapicata* Simon, 1878. Загальний список павуків Поліського природного заповідника склав 87 видів з 17 родин. Вперше було зафіксовано зараження павуків родини *Liocranidae* личинками мухи *Ogcodes* sp. (Diptera: Acroceridae). Зараженими були дві*

самиці павука *Agroeca prokita* (O. P.-Cambridge, 1871). Самиці були зібрані в сосновому лісі лишайниковому та березово-дубово-в'язовому лісі. Личинки локалізовані всередині черевця павуків біля епігастральної щілини. В статті наведені фотографії розташування личинок мухи всередині павука та зовнішнього вигляду личинок.

Ключові слова: павуки, Поліський природний заповідник, Україна.

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