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NEW DATA ON SPIDER FAUNA FROM NORTHERN SERBIA

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Abstract - During two years of research on the epigeic fauna in agroecosystems of northern Serbia, which was conducted as a part of SEE-ERA NET PLUS project no. 51, 5488 spider specimens were collected at three fields with oilseed rape (*Brassica napus* var. *oleifera*), turnip rape (*Brassica rapa* x *chinensis*) and winter wheat (*Triticum aestivum*).as subsequent crop.at Stari Žednik (Vojvodina). A total of 62 species from 15 families were identified. *Pardosa agrestis* and *Xysticus kochi* were the dominant species in the studied fields. Spider families with significant presence were Lycosidae, Linyphiidae, Thomisidae, Gnaphosidae, Theridiidae and Philodromidae. Seven species are new to the spider fauna of Serbia.

Key words: Spiders, Aranea, North Serbia, Vojvodina, taxonomy, biogeography

INTRODUCTION

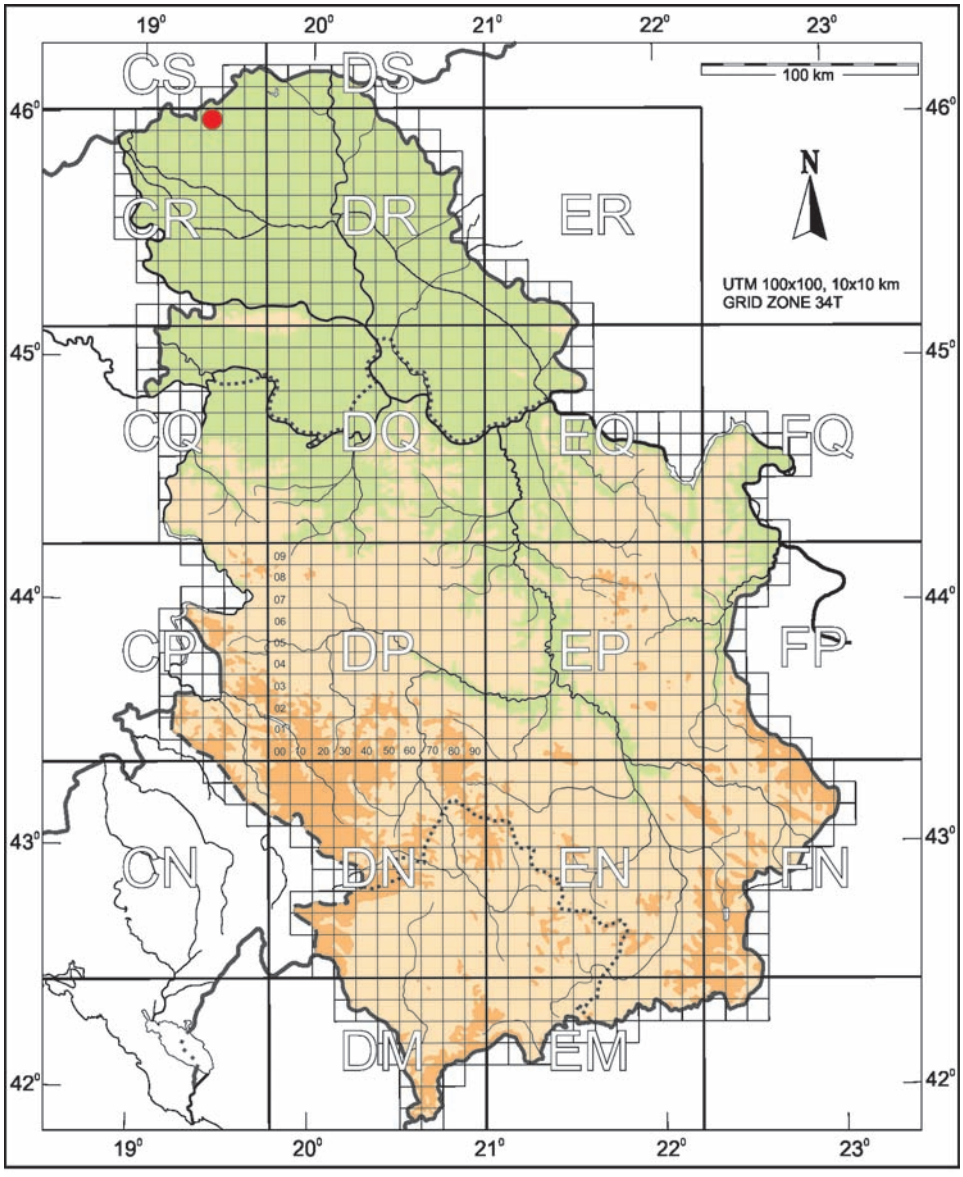
Data on spider fauna in northern regions of Serbia are still insufficient, from crop fields in particular. The richness depends, however, on the degree of exploration by arachnologists. Most investigations were conducted in area of Fruška Gora mountain by Chyzer and Kulzyński (1897), Sisojević and Miller in 1978 and Grbić and Savić from 2005 to 2009 (Grbić and Savić, 2010). Few faunistic studies were carried out in other parts of Vojvodina by Chyzer and Kulzyński (1894 and 1897) and Marinković in 1959 (Deltshev et al. 2003). In this paper we present a brief report on the spider fauna from arable fields in northern Serbia adjacent to the village Stari Žednik in the Vojvodina.

MATERIAL AND METHODS

Spiders were collected from October 2010 until June 2012, during the growing period of oilseed rape (*Brassica napus* var. *oleifera*) including turnip rape (*B. rapa* x *chinensis*) trap crop strips, and on winter wheat (*Triticum aestivum*), grown in crop rotation with oilseed rape from October 2011 until June 2012. The research was carried out as a part of the SEE-ERA-PLUS-NET project no. 51, at the locality Stari Žednik near Subotica, Serbia (Map 1). Spider specimens were sampled by epigeic and endogeic pitfall and emergence traps.

RESULTS AND DISCUSSION

A total of 5488 spider specimens from 62 species



Map 1 Locality of Stari Žednik, Serbia

and 15 families were collected and indentified (Table 1) of which 862 were juveniles. *Pardosa agrestis* (Westring, 1861) and *Xysticus kochi* were dominant species in the studied fields. *Pardosa agrestis* represented 54,7% of all spider specimens found (fig. 1). The second most common species was *Xysticus kochi* Thorell, 1872 which covered 12,2% of the total number of spiders, followed by *Trichoncoides piscator* (Simon, 1884) (8,5%). Four species were beyond 1% (*Erigone dentipalpis* (Wider, 1834), *Meioneta rurestris* (C. L. Koch, 1836), *Xerolycosa nemoralis* (Westring, 1861) and *Robertus arundineti* (O. P.-Cambridge, 1871)) (fig. 1). Seven species (*Tegenaria agrestis* (Walckenaer, 1802) *Zelotes tenuis* (L. Koch, 1866), *Zelotes mundus* (Kulczyński, 1897), *Zelotes pygmaeus* Miller, 1943, *Erigonoplus globipes* , (L. Koch, 1872) *Talavera aequipes* (O. P-Cambridge, 1871) and *Enoplognatha mordax* (Thorell, 1875))

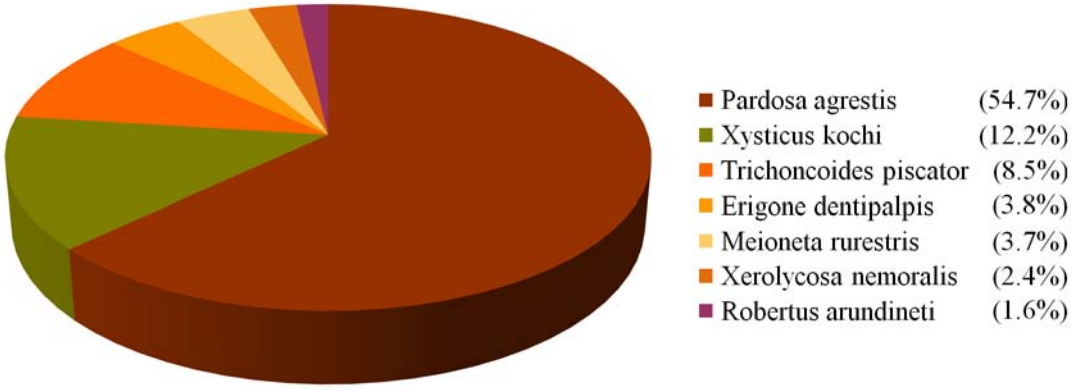


Fig. 2 Composition of dominant spider species on the crop fields of Stari Žednik locality

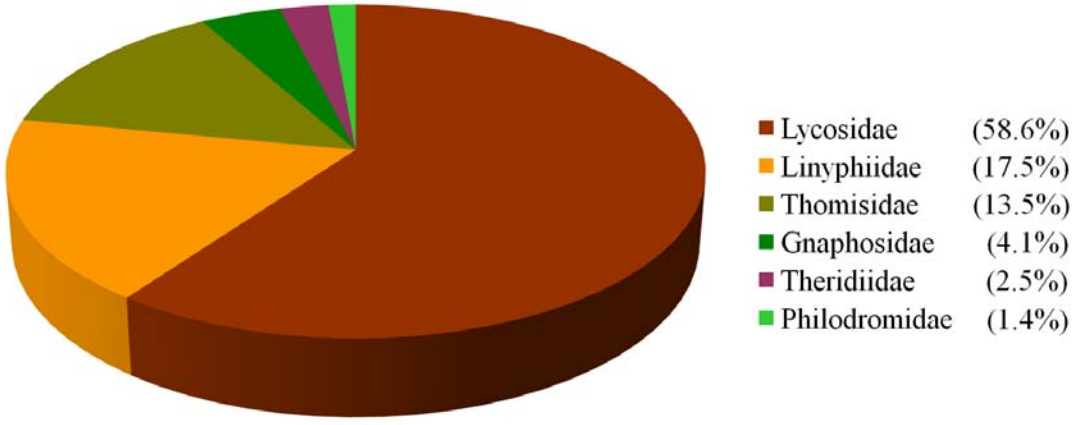


Fig. 3 Composition of dominant spider families at the crop fields near Stari Žednik locality

represent new records for the spider fauna of Serbia.

Spider families with significant presence were the Lycosidae (58,6%), Linyphiidae (17,5%), Thomisidae (13,5%), Gnaphosidae (4,1%), Theridiidae (2,5%) and Philodromidae (1,4%) (fig. 2). In terms of species composition, Lyniphiidae and Gnaphoside were most diverse with 13 species, followed by the Lycosidae (12 species).

Pardosa agrestis is the most common agrobiont spider in the studied agroecosystem. However, this species is not agrobiont in Western Europe. It gains increasing dominance in central Europe along a NW-SE gradient (Blick et al. 2000), probably as a result of adaptation to climatic conditions (Samu et al. 2011).

Other species (*Erigone dentipalpis, Meioneta rurestris* and *Xysticus kochi*) belong to the group of typical central European agrobiont spider species. *Trichoncoides piscator* and *Robertus arundineti* are inhabitants of open habitats, including cultivated fields (Kalushkov et al. 2008, Hula et al. 2009). *Xerolycosa nemoralis* is regarded as a forest species, but is not uncommon in open areas and can be found in arable fields (Urák et al. 2010).

Spider taxa, new to Serbian fauna are already registered in adjacent regions and are widely distributed

Table 1. List of the recorded spider species on the crop fields at Stari Žednik locality. Species marked with symbol "*" are new to the spider fauna of Serbia

Agelenidae	Lycosidae
Malthonica nemorosa (Simon, 1916)	*Alopecosa pulverulenta* (Clerck, 1757)
Tegenaria agrestis (Walckenaer, 1802)*	*Alopecosa sulzeri* (Pavesi, 1873)
Araneidae	*Pardosa agrestis* (Westring, 1861)
Hypsosinga pygmaea (Sundevall, 1831)	*Pardosa lugubris* (Walckenaer, 1802)
Singa hamata (Clerck, 1757)	*Pardosa monticola* (Clerck, 1757)
Singa nitidula C. L. Koch, 1866	*Pardosa prativaga* (L. Koch, 1870)
Gnaphosidae	*Pardosa proxima* (C. L. Koch, 1847)
Drassodes lapidosus (Walckenaer, 1802)	*Pirata piraticus* (Clerck, 1757)
Drassyllus lutetianus (L. Koch, 1866)	*Piratula latitans* (Blackwall, 1841)
Drassyllus praeficus (L. Koch, 1866)	*Trochosa robusta* (Simon, 1876)
Drassyllus pusillus (C. L. Koch, 1833)	*Trochosa ruricola* (De Geer, 1778)
Gnaphosa lucifuga (Walckenaer, 1802)	*Xerolycosa nemoralis* (Westring, 1861)
Haplodrassus dalmatensis (L. Koch, 1866)	Philodromidae
Haplodrassus minor (O. P.-Cambridge, 1879)	*Thanatus arenarius* L. Koch, 1872
Haplodrassus signifer (C. L. Koch, 1839)	*Tibellus oblongus* (Walckenaer, 1802)
Trachyzelotes pedestris (C. L. Koch, 1837)	Pisauridae
Zelotes gracilis (Canestrini, 1868)	*Pisaura mirabilis* (Clerck, 1757)
Zelotes mundus (Kulczynski, 1897)*	Salticidae
Zelotes pygmaeus Miller, 1943*	*Sibianor aurocinctus* (Ohlert, 1865)
Zelotes tenuis (L. Koch, 1866)*	*Talavera aequipes* (O. P.-Cambridge, 1871)*
Hahnidae	Tetragnathidae
Hahnia nava (Blackwall, 1841)	*Pachygnatha degeeri* Sundevall, 1830
Corinnidae	*Tetragnatha pinicola* L. Koch, 1870
Phrurolithus festivus (C. L. Koch, 1835)	Theridiidae
Linyphiidae	*Asagena phalerata* (Panzer, 1801)
Acartauchenius scurrilis(O. P.-Cambridge, 1872)	*Enoplognatha latimana* Hippa & Oksala, 1982
Araeoncus humilis (Blackwall, 1841)	*Enoplognatha mordax* (Thorell, 1875)*
Bathyphantes gracilis (Blackwall, 1841)	*Enoplognatha thoracica* (Hahn, 1833)
Diplostyla concolor (Wider, 1834)	*Robertus arundineti* (O. P.-Cambridge, 1871)
Erigone dentipalpis (Wider, 1834)	*Steatoda albomaculata* (De Geer, 1778)
Erigonoplus globipes (L. Koch, 1872) *	Thomisidae
Meioneta rurestris (C. L. Koch, 1836)	*Ozyptila praticola* (C. L. Koch, 1837)
Oedothorax apicatus (Blackwall, 1850)	*Xysticus kempeleni* Thorell, 1872
Pelecopsis parallela (Wider, 1834)	*Xysticus kochi* Thorell, 1872
Tenuiphantes tenuis (Blackwall, 1852)	*Xysticus luctuosus* (Blackwall, 1836)
Trichoncoides piscator (Simon, 1884)	
Trichoncus hackmani Millidge, 1955	
Trichopterna cito (O. P.-Cambridge, 1872)	

in Europe, thus their previous absence in Serbia can be explained by the insufficient research data.

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