

TISCIA monograph series



Landscape-scale connections between the land use, habitat quality and ecosystem goods and services in the Mureş/Maros valley

Edited by

László Körmöczi

Szeged-Arad
2012

Two countries, one goal, joint success!



Hungary-Romania
Cross-Border Co-operation
Programme 2007-2013

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Volume 10

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the land use, habitat quality and
ecosystem goods and services
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DATA ON THE ARTHROPOD (ARANEAE, FORMIVIDAE, HETEROPTERA) FAUNA OF FLOODPLAN FORESTS AT THE LOWER REACH OF THE RIVER MAROS/MURES

Róbert Gallé, Gábor Lőrinczi, Nikolett Szpisjak,
István Maák, Attila Torma

Introduction

Disturbance is especially relevant in riverine landscapes in which flooding contributes to both spatial and temporal environmental heterogeneity (Naiman and Décamps 1997; Ward *et al.* 2002, Lambeets *et al.* 2008b), The flood regime affects the habitat structure, as it often determines the amount of the leaf litter (Uetz *et al.* 1979) and the diversity and architecture of the vegetation, which are correlated with the arthropod fauna of floodland areas (Gallé *et al.* 2011), resulting in a specialized invertebrate fauna and high species diversity. The arthropod assemblages with a high number of species in floodplains, they can indicate the effect of different habitat parameters on a very small scale (Bonn and Kleinwachter 1999).

In the 19th century dikes were built along the river Maros to improve flood protection and support agriculture on the floodplain soils. Consequently, the floodplain area reduced with modified river dynamics and flooding regime. The arthropod fauna of Western European floodplains has been investigated by numerous authors (e.g. Greenwood *et al.* 1995, Bell *et al.* 1999, Lambeets *et al.* 2008a,b, 2009). However the arthropod fauna of the floodplain of river Maros and other rivers of the region is relatively poorly known (Gallé *et al.* 2005, Urák & Gallé 2005, Duma, 2006).

The aim of the present study was to reveal the composition of the ground dwelling arthropod of the floodplain of river Maros.

Material and Methods

Study area and sampling

The present study was carried out at the habitat complex of the riparian area of the lower Maros-valley near Pesica. In the floodplain forests, 30 plots were selected for sampling spider assemblages. To characterize the structure of the habitat, the percentage cover of the herbaceous vegetation, bare soil surface, leaf litter were assessed in three 1 × 1 meters quadrates at each sampling plot. The

canopy closure was also assessed at each sampling plot. The location and habitat characteristics are given in Table 1.

To sample the invertebrate fauna pitfall traps were applied (diameter 85 mm, filled with ethylene glycol as preservative, Koivula 2003, Schmidt *et al.* 2006). At each site five traps were placed. The traps were open for two 3-week long periods (02-21 June 2011 and 15 June- 06 July 2012). We expected an underestimation of the abundance of vegetation-dwelling and web-building species, as pitfall traps measure the activity-density of species at the ground level.

Results and Discussion

The faunistic data concerning the species-abundance data are given in Table 1 and 2.

During the two-years study a total number of 3562 spiders were collected belonging to 73 species and 19 families. The most abundant species was *Ozyptila praticola* (C.L. Koch, 1837), 895 specimens were collected. This species is of wide distribution area occurring mainly in floodplain forests. As *O. praticola* is a ground-dwelling crab spider it can be collected with high numbers with pitfall traps. This species occurred at all sampling sites. The lycosid *Pardosa lugubris* (Walckenaer, 1802) and *Phrurolithus festivus* (C.L. Koch, 1835), belonging to Corinnidae were also frequent.

In the two years a total of 38,464 ant individuals (38,323 workers, 123 queens, 18 males) were recorded, which represent 18 species of four subfamilies and nine genera (Table 1). The major part of species belonged to the Formicinae subfamily (9), followed by Myrmicinae (6). Among the genera found, *Lasius* presented the largest number of species (7).

Most of the collected species were recorded both from islands and riverbanks. Only five species, *Myrmica sabuleti*, *Temnothorax affinis*, *Tetramorium* cf. *caespitum*, *Lasius distinguendus* and *L. umbratus* were those that occurred only in islands, and one species, *L. flavus* was that that occurred only on riverbanks.

The most abundant ant species was clearly *Liometopum microcephalum*, representing more than 90% of all workers collected. Most of its individuals were, however, found only in a few locations and were obtained only from a small number of traps. This result was due to the particular foraging behaviour of this species. *L. microcephalum* is a dendrophilous, mainly oak-dwelling ant, which has very large colonies with several thousand individuals (Wiest 1967). Workers commonly form very long and busy trails that are used to connect their nest and foraging trees (Emery 1891). As a consequence of this, occasionally large number of workers falls into single traps that just cross their foraging trails.

Table 1. Location and habitat structure of the sampling sites. i: island, b: bank of the river

Site ID	Coordinates	Bare ground (%)	Leaf litter (%)	Veg. Coverage (%)	average height of herbaceous vegetation (cm)	Canopy colosure (%)	Location
1	N46 08.235 E21 08.789	2,7	21,7	70,0	56,7	71,7	i
2	N46 08.173 E21 07.714	21,7	6,7	68,3	23,3	70,0	i
3	N46 08.259 E21 08.836	18,3	20,0	61,7	53,3	75,0	b
4	N46 08.301 E21 07.713	5,0	70,0	30,0	15,0	66,7	b
5	N46 08.326 E21 06.902	5,0	48,3	48,3	50,0	36,7	b
6	N46 08.325 E21 06.790	0,0	88,3	11,7	30,0	87,7	i
7	N46 09.065 E21 05.024	1,7	11,7	83,3	56,7	45,0	i
8	N46 08.986 E21 04.870	58,3	25,0	16,7	18,3	78,3	b
9	N46 09.037 E21 03.955	1,7	55,0	43,3	53,3	75,0	i
10	N46 08.985 E21 03.908	1,7	84,3	15,7	43,3	85,0	b
11	N46 09.047 E21 03.873	0,0	68,3	31,7	43,3	88,3	i
12	N46 08.973 E21 03.794	0,0	83,3	16,7	40,0	93,3	b
13	N46 08.895 E21 03.107	25,0	41,7	33,3	38,3	75,0	i
14	N46 08.950 E21 02.984	13,3	78,3	8,3	23,3	95,0	i
15	N46 08.963 E21 02.874	0,0	86,7	13,3	20,0	85,0	b
16	N46 08.905 E21 02.423	3,3	23,3	73,3	56,7	35,0	i
17	N46 08.886 E21 02.350	6,7	43,3	50,0	43,3	58,3	i
20	N46 08.912 E21 01.986	0,0	46,7	53,3	63,3	76,7	i
21	N46 08.961 E21 01.235	6,7	61,7	31,7	60,0	75,0	i
22	N46 09.005 E21 01.105	1,7	55,0	31,7	60,0	75,0	b
23	N46 08.887 E21 02.333	6,7	43,3	50,0	43,3	58,3	i
24	N46 08.864 E21 02.382	10,0	41,7	48,3	33,3	91,7	b
25	N46 08.629 E20 59.081	0,0	56,7	43,3	60,0	75,0	i
26	N46 08.555 E20 59.044	10,0	63,3	26,7	53,3	78,3	b
27	N46 08.313 E20 59.137	3,3	81,7	15,0	43,3	88,3	i
28	N46 08.366 E20 59.112	0,0	75,0	25,0	36,7	71,7	b
29	N46 08.134 E20 59.563	3,3	73,3	23,3	50,0	85,0	i
30	N46 08.070 E20 59.838	1,7	76,7	21,7	28,3	91,7	b

Table 2. The list of the collected species in 2011 and 2012. Column captions are the site ID-s (cf. Table 1.)

2011

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Σ
Spiders																							
Dysderidae																							
<i>Dysdera nimii</i> Canestrini, 1868	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Linyphiidae																							
<i>Acartauchenius scurrilis</i> (O.P.- Cambridge, 1872)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<i>Araeoncus humilis</i> (Blackwall, 1841)	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
<i>Diplocephalus cristatus</i> (Blackwall, 1833)	0	0	0	0	4	0	1	1	0	0	0	2	0	2	1	0	3	0	0	3	1	18	
<i>Diplocephalus picinus</i> (Blackwall, 1841)	0	0	0	0	2	0	0	1	1	1	0	0	0	2	0	1	0	1	0	1	1	0	10
<i>Diplostyla concolor</i> (Wider, 1834)	8	1	0	0	0	0	2	2	2	2	0	1	5	2	0	4	0	2	2	0	2	2	37
<i>Erigone dentipalpis</i> (Wider, 1834)	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	7	
<i>Maso sundevalli</i> (Westring, 1851)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3	
<i>Meioneta rurestris</i> (C.L. Koch, 1836)	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Neritene clathrata</i> (Sundevall, 1830)	1	0	0	0	0	0	0	2	0	0	0	7	0	1	3	0	0	0	0	0	0	14	
<i>Tenuiphantes flavipes</i> (Blackwall, 1854)	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Σ
<i>Trichoncus hackmani</i> Millidge, 1956	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Trichopterna cito</i> (O.P.-Cambridge, 1872)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Pelecopsis radticicola</i> (L. Koch, 1872)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
<i>Walckenaeria atrotibialis</i> (O.P.-Cambridge, 1878)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
<i>Walckenaeria mitrata</i> (Menge, 1868)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Tetragnathidae																							
<i>Pachygnatha degeeri</i> Sundevall, 1830	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Pachygnatha listeri</i> Sundevall, 1830	0	0	0	0	3	0	0	2	0	2	0	0	1	0	1	0	2	0	0	0	0	0	11
Theridiidae																							
<i>Enoplognatha thoracica</i> (Hahn, 1833)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Robertus lividus</i> (Blackwall, 1836)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4
Lycosidae																							
<i>Arctosa luteitana</i> (Simon, 1876)	2	0	0	0	1	2	0	0	0	2	0	0	1	0	0	4	0	0	0	3	1	0	16
<i>Pardosa agrestis</i> (Westring, 1862)	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	11
<i>Pardosa amentata</i> (Clerck, 1757)	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
<i>Pardosa lugubris</i> (Walckenaer, 1802)	3	4	0	31	23	1	4	7	4	2	5	18	13	2	0	1	2	5	0	3	3	17	148
<i>Pardosa prativaga</i> (L. Koch, 1870)	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Σ
<i>Pirata hygrophilus</i> Thorell, 1872	0	1	1	0	6	0	7	10	1	3	0	1	1	9	0	2	10	6	5	3	1	4	71
<i>Pirata latitans</i> (Blackwall, 1841)	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
<i>Trochosa ruricola</i> (De Geer, 1778)	5	0	0	0	3	0	1	0	0	0	0	0	9	0	0	0	0	1	0	0	1	0	20
<i>Trochosa terricola</i> Thorell, 1856	2	1	0	9	4	2	4	2	0	1	3	2	2	0	0	0	0	0	1	9	3	5	50
<i>Xerolycosa miniata</i> (C.L. Koch, 1834)	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	3
Pisauridae																							
<i>Pisaura mirabilis</i> (Clerck, 1757)	3	0	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	7
Corinnidae																							
<i>Phrurolithus festivus</i> (C.L. Koch, 1835)	19	0	0	0	5	0	2	0	1	2	0	4	35	1	3	3	2	5	8	0	3	0	93
<i>Phrurolithus minimus</i> C.L. Koch, 1839	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hahnidae																							
<i>Hahnia nava</i> (Blackwall, 1841)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Amaroebidae																							
<i>Coelotes longispinus</i> Kulczynski, 1897	0	0	0	2	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	5
Titanoecidae																							
<i>Titanoeca schineri</i> (L. Koch, 1872)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Liocranidae																							
<i>Agroeca brunnea</i> (Blackwall, 1833)	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0	1	0	0	1	0	0	1	7

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Σ
<i>Agraeina striata</i> (Kulczynski, 1882)	3	0	0	1	1	1	0	2	1	7	3	13	7	19	2	1	2	4	2	7	0	7	83
<i>Scotina celans</i> (Blackwall, 1841)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Clubionidae																							
<i>Clubiona lutescens</i> Westring, 1851	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	7
<i>Clubiona pallidula</i> (Clerck, 1757)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2
Zodariidae																							
<i>Zodarion germanicum</i> (C.L. Koch, 1837)	0	0	0	0	0	0	0	0	7	0	0	5	0	0	0	9	0	0	0	0	0	0	21
Gnaphosidae																							
<i>Drassodes lapidosus</i> (Walckenaer, 1802)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
<i>Drassyllus villicus</i> (Thorell, 1875)	0	0	0	0	1	0	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	5
<i>Haplodrassus minor</i> (O.P.-Cambridge, 1879)	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
<i>Haplodrassus silvestris</i> (Blackwall, 1833)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Micaria pulicaria</i> (Sundevall, 1832)	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3
<i>Scotophaeus scutulatus</i> (L. Koch, 1866)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<i>Trachyzelotes pedestris</i> (C.L. Koch, 1837)	3	3	0	0	6	0	0	3	0	0	1	10	2	1	0	1	0	0	0	1	1	32	
<i>Zelotes apricorum</i> (L. Koch, 1876)	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Zoridae																							

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Σ
<i>Zora spinimana</i> (Sundevall, 1833)	1	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	1	1	0	1	0	10
Philodromidae																							
<i>Philodromus cespitum</i> (Walckenaer, 1802)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Thomisidae																							
<i>Oxyptila praticola</i> (C.L. Koch, 1837)	67	1	1	12	32	4	11	4	34	33	21	39	86	28	13	23	20	22	54	21	42	51	619
<i>Xysticus kochi</i> Thorell, 1872	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Xysticus luctator</i> L. Koch, 1870	2	3	1	1	1	0	0	0	1	2	7	0	0	0	0	0	0	0	0	0	1	0	19

Ants

Workers

Subfamily Ponerinae

Ponera coarctata (Latreille, 1802) 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 1 0 0 2

Subfamily Myrmicinae

Myrmecina graminicola (Latreille,
1802) 0 1 0 0 1

Myrmica rubra (Linnaeus, 1758) 15 14 47 0 11 8 10 3 55 13 0 43 1 0 0 5 3 9 14 58 2 11 322

Myrmica sabuleti Meinert, 1861 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1

Temnothorax crassispinus
(Karavaiev, 1926)

0 0 0 1 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 1 0 0 4

Tetramorium cf. caespitum

0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 Σ

Subfamily Dolichoderinae

<i>Dolichoderus quadripunctatus</i> (Linnaeus, 1771)	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
<i>Liometopum microcephalum</i> (Panzer, 1798)	0	0	0	62	0	0	0	3	29	273	76	3	0	0	0	0	0	1	5284	0	0	5731

Subfamily Formicinae

<i>Camponotus fallax</i> (Nylander, 1856)	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Lasius brunneus</i> (Latreille, 1798)	0	0	0	5	0	0	0	1	0	1	3	0	0	0	0	0	0	0	0	0	0	10
<i>Lasius flavus</i> (Fabricius, 1782)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
<i>Lasius niger</i> (Linnaeus, 1758)	34	3	0	0	51	1	3	6	3	67	1	6	96	20	20	2	13	21	45	6	35	730
<i>Lasius platythorax</i> Seifert, 1991	2	5	0	1	0	6	1	3	4	2	1	0	0	0	4	1	0	0	0	4	1	35

Queens

Subfamily Ponerinae

<i>Ponera coarctata</i> (Latreille, 1802)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	4
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Subfamily Myrmicinae

<i>Myrmica rubra</i> (Linnaeus, 1758)	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	1	1	0	0	5
<i>Tetramorium cf. caespitum</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1

Subfamily Formicinae

<i>Camponotus truncatus</i> (Spinola, 1808)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Σ	
<i>Lasius distinguendus</i> (Emery, 1916)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
<i>Lasius fuliginosus</i> (Latreille, 1798)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Lasius niger</i> (Linnaeus, 1758)	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	9	0	0	0	0	0	7	0	18
<i>Lasius platythorax</i> Seifert, 1991	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4

Heteroptera

Saldidae

Saldula c-album (Fieber, 1859) 0 0 0 0 0 0 0 2 0 0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 6

Miridae

Mermilocerus schmidti (Fieber, 1836) 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 2

Lygus punctatus (Zetterstedt, 1839) 0 1 0 0 1

Agrocoris reclairei E. Wagner, 1949 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1

Halticus saltator (Geoffroy, 1785) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 1

Pilophorus confusus (Kirschbaum, 1856) 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1

Orthonotus rufifrons (Fallén, 1807) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1

Nabidae

Himacerus (s. str.) *apterus* (Fabricius, 1798) 1 0 1

Aradidae

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Σ	
<i>Aradus distinctus</i> Fieber, 1861	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<i>Lygaeidae sensu lato</i>																								
<i>Dryinus (Sylvadrimus) brunneus</i> (F. Sahlberg, 1848)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
<i>Scolopostethus puberulus</i> Horváth, 1887	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Scolopostethus affinis</i> (Schilling, 1829)	1	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	5
<i>Scolopostethus thomsoni</i> Reuter, 1874	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
<i>Scolopostethus pilosus</i> Reuter, 1874	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
Cydnidae																								
<i>Legnotus limbosus</i> (Geoffroy, 1785)	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	4
Pentatomidae																								
<i>Rhaphigaster nebulosa</i> (Poda, 1761)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1

2012

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ
Spiders																			
Dysderidae																			
<i>Dysdera hungarica</i> Kulczynski, 1897	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Linyphiidae																			
<i>Ceratinella brevis</i> (Wider, 1834)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Diplocephalus cristatus</i> (Blackwall, 1833)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Diplocephalus picinus</i> (Blackwall, 1841)	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	3
<i>Diplostyla concolor</i> (Wider, 1834)	5	1	2	0	0	0	1	3	2	2	0	0	0	0	0	2	1	1	20
<i>Maso sundevalli</i> (Westring, 1851)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Meioneta rurestris</i> (C.L. Koch, 1836)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
<i>Nerene clathrata</i> (Sundevall, 1830)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
<i>Tenuiphantes flavipes</i> (Blackwall, 1854)	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	1	1	5
<i>Pelecopsis radlicicola</i> (L. Koch, 1872)	1	3	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9
<i>Walckenaeria alliceps</i> (Denis, 1952)	0	0	1	0	0	0	4	2	1	0	0	0	1	1	0	1	0	1	11
<i>Walckenaeria cucullata</i> (C.L. Koch, 1836)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
Tetragnathidae																			
<i>Pachygnatha degeeri</i> Sundevall, 1830	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ
<i>Pachynatha listeri</i> Sundevall, 1830	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
Theridiidae																			
<i>Episinus angulatus</i> (Blackwall, 1836)	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Robertus lividus</i> (Blackwall, 1836)	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Lycosidae																			
<i>Arctosa leopardus</i> (Sundevall, 1833)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
<i>Arctosa lutetiana</i> (Simon, 1876)	0	0	0	5	0	1	0	0	0	0	0	0	0	3	0	0	1	0	10
<i>Pardosa agrestis</i> (Westring, 1862)	0	1	0	0	1	1	0	0	1	0	1	0	2	0	0	1	0	0	8
<i>Pardosa agricola</i> (Thorell, 1856)	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
<i>Pardosa amentata</i> (Clerck, 1757)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pardosa lugubris</i> (Walckenaer, 1802)	3	24	30	18	0	25	16	1	18	16	2	2	1	9	1	48	2	2	218
<i>Pardosa prativaga</i> (L. Koch, 1870)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pirata hygrophilus</i> Thorell, 1872	1	0	7	1	0	1	2	0	0	2	0	4	0	0	0	0	0	0	18
<i>Pirata latitans</i> (Blackwall, 1841)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Trochosa ruricola</i> (De Geer, 1778)	0	2	5	0	0	1	56	0	1	0	0	0	1	0	0	2	1	0	69
<i>Trochosa terricola</i> Thorell, 1856	0	3	2	3	1	1	4	0	0	0	0	0	0	0	1	3	4	1	23
<i>Xerolycosa miniata</i> (C.L. Koch, 1834)	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	3
Pisauridae																			
<i>Pisaura mirabilis</i> (Clerck, 1757)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ
Agelenidae																			
<i>Agelena labyrinthica</i> (Clerck, 1757)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Corinnidae																			
<i>Phrurolithus festivus</i> (C.L. Koch, 1835)	2	6	11	0	2	1	46	3	57	0	9	0	29	1	7	25	0	0	199
Amaurobidae																			
<i>Urocoras longispinus</i> (Kulczyński, 1897)	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3
Liocranidae																			
<i>Agroeca brunnea</i> (Blackwall, 1833)	0	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
<i>Agroeca cuprea</i> Menge, 1873	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
<i>Liocranoeca striata</i> (Kulczyński, 1882)	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	3
<i>Scotina celans</i> (Blackwall, 1841)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Clubionidae																			
<i>Clubiona lutescens</i> Westring, 1851	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
<i>Clubiona pallidula</i> (Clerck, 1757)	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
Zodariidae																			
<i>Zodarium germanicum</i> (C.L. Koch, 1837)	16	0	12	0	23	3	1	1	0	0	0	0	1	6	0	11	0	0	74
Gnaphosidae																			
<i>Drassyllus pusillus</i> (C.L. Koch, 1833)	0	3	1	0	0	0	2	0	3	0	0	0	0	1	0	1	1	0	12
<i>Drassyllus villicus</i> (Thorell, 1875)	0	0	1	0	0	0	1	0	0	0	0	0	1	2	0	1	2	0	8

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ
<i>Haplodrassus minor</i> (O.P.-Cambridge, 1879)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
<i>Micaria pulicaria</i> (Sundevall, 1832)	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Trachyzelotes pedestris</i> (C.L. Koch, 1837)	0	5	25	5	3	6	1	0	13	14	0	0	0	13	5	7	11	1	109
<i>Zelotes apricorum</i> (L. Koch, 1876)	0	4	2	2	1	2	0	0	0	1	1	0	9	2	0	6	4	0	34
<i>Zelotes gracilis</i> Canestrini, 1868	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
<i>Zelotes longipes</i> (L. Koch, 1866)	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2
Zoridae																			
<i>Zora spinimana</i> (Sundevall, 1833)	0	0	0	0	0	0	0	0	0	1	1	0	7	0	0	0	0	0	9
Thomisidae																			
<i>Oxyptila praticola</i> (C.L. Koch, 1837)	10	17	22	13	24	11	48	15	64	5	5	1	8	20	5	13	29	4	314
<i>Xysticus luctator</i> L. Koch, 1870	0	1	0	3	0	2	1	0	0	0	0	0	0	3	0	2	0	0	12
Salticidae																			
<i>Euophrys frontalis</i> (Walckenaer, 1802)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
<i>Euophrys obsoleta</i> (Simon, 1868)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
<i>Myrmarchne formicaria</i> (De Geer, 1778)	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Neon reticulatus</i> (Blackwall, 1853)	0	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	1	0	7

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ
Ants																			
Workers																			
Subfamily Ponerinae																			
<i>Ponera coarctata</i> (Latreille, 1802)	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4
Subfamily Myrmicinae																			
<i>Myrmecina graminicola</i> (Latreille, 1802)	0	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	5
<i>Myrmica rubra</i> (Linnaeus, 1758)	63	66	24	52	83	0	0	2	0	9	0	206	21	106	22	105	51	810	
<i>Myrmica sabuleti</i> Meinert, 1861	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3
<i>Tennothorax affinis</i> (Mayr, 1855)	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
<i>Tennothorax crassispinus</i> (Karavaiev, 1926)	0	4	1	6	1	1	0	2	1	0	1	0	8	16	2	2	2	1	48
<i>Tetramorium cf. caespitum</i>	1	0	0	0	0	0	13	0	1	0	0	0	0	0	0	0	0	0	15
Subfamily Dolichoderinae																			
<i>Dolichoderus quadripunctatus</i> (Linnaeus, 1771)	0	2	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	6
<i>Liometopum microcephalum</i> (Panzer, 1798)	0	0	0	9612	0	0	0	2	0	0	0	1	86	0	0	10	6	5586	7
Subfamily Formicinae																			
<i>Camponotus truncatus</i> (Spinola, 1808)	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	4
<i>Lasius brunneus</i> (Latreille, 1798)	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	20
<i>Lasius niger</i> (Linnaeus, 1758)	61	0	91	0	0	1	432	98	165	16	24	49	91	0	14	7	0	0	1049

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ	
<i>Lasius platythorax</i> Seifert, 1991	39	24	27	20	26	7	35	231	0	0	0	0	2	81	59	158	0	7	716	
Queens																				
Subfamily Myrmicinae																				
<i>Myrmecina graminicola</i> (Latreille, 1802)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
<i>Myrmica rubra</i> (Linnaeus, 1758)	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	
Subfamily Formicinae																				
<i>Lasius brunneus</i> (Latreille, 1798)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
<i>Lasius distinguendus</i> (Emery, 1916)	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	
<i>Lasius fuliginosus</i> (Latreille, 1798)	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	
<i>Lasius niger</i> (Linnaeus, 1758)	2	0	2	0	2	0	10	1	1	0	0	1	1	0	0	0	1	0	21	
<i>Lasius platythorax</i> Seifert, 1991	0	4	4	0	19	0	14	1	1	0	0	0	4	1	0	8	1	0	57	
<i>Lasius umbratus</i> (Nylander, 1886)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
Males																				
Subfamily Dolichoderinae																				
<i>Dolichoderus quadripunctatus</i> (Linnaeus, 1771)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
Subfamily Formicinae																				
<i>Lasius</i> sp.	0	0	0	0	0	1	6	0	6	1	0	0	0	1	0	1	1	0	17	

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ
Heteroptera																			
Ceratocombidae																			
<i>Ceratocombus coleoptratus</i> (Zetterstedt, 1819)	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Tingidae																			
<i>Derephysia foliacea</i> (Fallén, 1807)	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2
Miridae																			
<i>Halticus luteicollis</i> (Panzer, 1805)	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
<i>Salicarus roseri</i> (Herrich-Schäffer, 1839)	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Orthonotus rufifrons</i> (Fallén, 1807)	0	3	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	6
Nabidae																			
<i>Himacerus</i> (<i>s. str.</i>) <i>apterus</i> (Fabricius, 1798)	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Anthocoridae																			
<i>Orius</i> (<i>Heterorius</i>) <i>minutus</i> (Linnaeus, 1758)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Aradidae																			
<i>Aradus distinctus</i> Fieber, 1861	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Lygaeidae sensu lato</i>																			
<i>Drymus</i> (<i>Sylvadrymus</i>) <i>ryei</i> Saunders, 1892	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

	1	2	5	6	9	10	13	16	21	22	23	24	25	26	27	28	29	30	Σ
<i>Eremocoris podagricus</i> (Fabricius, 1775)	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	4
<i>Scolopostethus pictus</i> (Schilling, 1829)	0	0	0	0	0	0	2	1	0	0	0	0	0	0	4	1	0	0	8
<i>Scolopostethus affinis</i> (Schilling, 1829)	3	6	0	1	0	0	2	0	0	0	0	0	0	0	0	0	1	0	13
<i>Rhyparochromus vulgaris</i> (Schilling, 1829)	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	8
<i>Raglius alboacuminatus</i> (Goeze, 1778)	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Coreiidae																			
<i>Coreus marginatus</i> (Linnaeus, 1758)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cydnidae																			
<i>Legnotus limbosus</i> (Geoffroy, 1785)	4	2	0	1	3	1	0	0	0	0	0	0	0	0	2	7	0	0	20
Pentatomidae																			
<i>Palomena prasina</i> (Linnaeus, 1761)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

The most frequent species were *Lasius niger* and *Myrmica rubra*, occurring at most sampling sites. These species belong to the most common ant species in Central Europe. *Lasius* species are habitat generalists and known to have good dispersion abilities, they are the first ant colonizers of newly formed habitats (Vepsäläinen and Pisarski 1982). *M. rubra*, which is a moderately hygrophilous species, occurs in very diverse habitats, but it is particularly abundant in meadows with a high level of ground water (Czechowski *et al.* 2012). In the Upper-Maros/Mureş region *M. rubra* is a typical ant for wet habitats, including floodplain forests, wet meadows and peat bogs (Gallé *et al.* 2005). This species can also survive by forming floating aggregations of workers and queens on the water surface (Dietrich *et al.* 1998, Gallé *et al.* 2005). Because of their good transitions from monogyny to polygyny, *Myrmica* species also tend to monopolise islands if the habitats are suitable, and so they can occupy convenient nesting places in a short time (Vepsäläinen and Pisarski 1982).

110 specimens of 27 true bug species were collected during the two years sampling period and only 6 species were collected both years. It is well-known that the ground-dwelling true-bug fauna of the forests is scarce compared to the grasslands (Torma & Gallé 2010). In order to gain a more complete picture of the true-bug fauna of the floodplain forests different sampling methods should be also applied (e.g. flight-interception traps, Gossner 2009). The dominant species were *Legnotus limbosus* (Geoffroy, 1785) and *Scolopostethus affinis* (Schilling, 1829). Out of the forest heteroteran species *L. limbosus* is a relatively heliophilous species with preference to scarce canopy cover (Holecová *et al.* 2005). The preferred hostplants for *S. affinis* is *Urtica dioica* and *Fragaria* species; may also be a scavenger or fungivorous, this species occurs on the leaf litter of several forest types (Southwood & Leston 1959, Davis 1989).

There are only few ground-dwelling arthropod species that can tolerate the occasional disturbance caused by the river flood. Local species diversity can be also affected by anthropogenic disturbance, namely the perpetual presence of fishermen and weekend tourists both on the riverbanks and in the islands.

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