PRELIMINARY RESULTS ON THE INVERTEBRATE FAUNA (ARANEAE, ORTHOPTERA, HETEROPTERA AND HYMENOPTERA: FORMICIDAE) OF ALKALINE GRASSLANDS OF THE HUNGARIAN-ROMANIAN BORDER

Gábor Lőrinczi, Miklós Bozsó, Ioan Duma, Marian Petrescu, Róbert Gallé, Attila Torma

Introduction

Alkaline grasslands, which have been present in the Pannonian Basin since the Pleistocene (Kun 1998, Molnár and Borhidi 2003), belong to the most typical communities in this region (Illyés et al. 2007). In Hungary, alkaline grasslands form the third part of grassland habitats. Only a small proportion of these are of ancient origin, most of them are secondary, and originated mainly as the result of river regulations and drainages in the 19th and 20th century (Kun 1998). According to Molnár and Borhidi (2003) about 40 percent of alkaline grasslands can be considered as natural or semi-natural habitats from the point of view of nature conservation.

In Hungary, a total of 54 plant communities are known in saline habitats, which are though relatively species-poor but have characteristic and manifold species composition (Tóth and Szendrei 2006). The vegetation pattern of alkaline grasslands strongly depends on soil salinity, salt quality, depth of maximum salt content and water availability. The typical zonations of saline vegetation are *Artemisia* salt steppe, alkaline berm ("szikpadka"), Pannonic *Camphorosma* hollow, dense and tall *Puccinellia* sward, alkaline vein ("szikér"), salt meadow and salt marsh (Molnár and Borhidi 2003).

Due to the exceptionally rich fauna and mosaic flora with several endemics and subendemics (Kelemen, 1997), alkaline grasslands are valuable from a nature conservation perspective.

In 2010 a faunistic survey was carried out in order to compare the invertebrate fauna of two neighbouring alkaline grasslands separated by the Hungarian-Romanian border. Preliminary results of the study are presented in the following.

Materials and methods

The study was carried out in the border region of Gyula, Hungary and Vărşand, Romania. Data were collected with a variety of collecting methods in the following habitat types:

Gyula I: (1) loess steppe and salt meadow; (2) salt meadow; (3) salt meadow and *Artemisia* salt steppe; (4) loess steppe; (5) Pannonic *Camphorosma* hollow and dense and tall *Puccinellia* sward with salt meadow; (6) salt meadow; (7) *Artemisia* salt steppe with dense and tall *Puccinellia* sward patches and Pannonic *Camphorosma* hollow; (8) loess steppe patches; (9) transition from *Artemisia* salt steppe to dense and tall *Puccinellia* sward; (10) salt meadow.

Sampling was performed with pitfall trapping and sweep netting during summer 2010. At each habitat 5-5 pitfall traps (500 ml plastic jars filled with ethylene-glycol) were set at intervals of approximately 4 m. Trapping was continuous from 1 June to 22 September 2010. 5 sweep net samples (each of them consisted of 50 sweeps) were taken at each habitat in 1 June, 5 July, 4 August and 22 September. Net contents were emptied into sealable plastic bags filled with some ethyl alcohol.

Sweep netting (5 × 50 sweeps) was also employed in the following sites and habitat types:

Gyula II: (1) salt meadow with loess steppe and *Artemisia* salt steppe; (2) salt meadow; (3) new abandonment on arable lands and salt meadow.

Gyula III: (1) salt meadow and *Artemisia* salt steppe; (2) *Artemisia* salt steppe with salt meadow patches.

Szabadkígyós: (1) *Artemisia* salt steppe; (2) salt marsh.

Elek: (1) loess steppe; (2) salt meadow with Pannonic *Camphorosma* hollow, dense and tall *Puccinellia* sward and *Artemisia* salt steppe patches; (3) loess steppe; (4) *Artemisia* salt steppe.

Kétegyháza: (1) salt meadow and salt marsh; (2) salt meadow.

Vărşand I: (1) uncharacteristic grassland; (2) *Achillea* salt steppe with loess steppe patches; (3) loess steppe; (4) *Artemisia* salt steppe with salt meadow patches and salt meadow with *Artemisia* salt steppe patches.

Pilu: (1) uncharacteristic grassland (or degraded loess steppe); (2) *Achillea* salt steppe with *Artemisia* salt steppe patches; (3) degraded loess steppe; (4) *Artemisia* salt steppe with salt meadow patches and Pannonic *Camphorosma* hollow; (5) *Artemisia* salt steppe and salt meadow with loess steppe patches; (6) salt meadow with uncharacteristic grassland.

Pitfall trapping and D-vac sampling (using a Stihl® BG56 Leaf Blower/VAC vacuum sampling device) were conducted in the following sites and habitat types:

Gyula IV: (1) salt meadow; (2) salt steppe with uncharacteristic vegetation.

Vărşand II: (1) degraded loess steppe; (2) *Artemisia* salt steppe; (3) higrophile meadow close to an irrigation canal; (4) salt meadow with ruderal plants.

D-vac sampling consisted of 25 sample units of 1 m^2 with a ca. 5-minutes vacuum time per habitat. Sampling was performed in 4 July, 7 August, 22 August and 27 September.

Spiders were determined according to Heimer and Nentwig (1991), Loksa (1969, 1972), Roberts (1985, 1987), Nentwig et al. (2003), Fuhn and Niculescu-Burlacu (1971) and Sterghiu (1985). Orthopteran specimens were identified using the keys of Kis (1976, 1978), Harz (1957), Móczár (1969) and Knechtel and Popovici-Biznosanu (1959). True bugs were identified according to Benedek (1969), Halászfy (1959), Kis (1984, 2001), Kis and Kondorosy (1999), Vásárhelyi (1978, 1983) and Wagner (1952, 1966, 1967). Ant specimens were determined using the keys of Seifert (1988, 1997, 2007), Czechowski et al. (2002), Csősz (1999) and Kutter (1977).

Results and discussion

Araneae

A total number of 1541 spider individuals (1344 adult and 197 juvenile) of 97 species were identified from pitfall trap and D-vac samples (Table 1). Among the rare species we can mention *Urocoras longispinus* (Kulczynski, 1897).

We collected several agrobiont and agrophile species. *Pardosa agrestis* (Westring, 1862), *Meioneta rurestris* (C.L. Koch, 1836), *Alopecosa pulverulenta* (Clerck, 1757), *Trochosa ruricola* (De Geer, 1778) and *Erigone dentipalpis* (Wider, 1834) are known to occur at agroecosystems and disturbed habitat types (Hänggi et al. 1995, Bogya and Markó 1999, Kiss and Samu 2000, Samu and Szinetár 2002). The occurrence and the high numbers of collected individuals of these species are presumably brought about not the influence of the fauna of the surrounding arable fields. According to Wissinger (1997) the agrobiont fauna consists of species adapted to predictably ephemeral habitats, they evolved the "cyclic colonization" strategy form natural or semi-natural refuges. According to this theory the agrobiont fauna possibly originated from regularly disturbed habitat types such as the annually inundated alkaline grasslands (Szita et al 1998, 2002, Samu and Szinetár 2000).

There are several data on the spider fauna of the alkaline grasslands of this region (Szita et al. 1998, 1999, 2000). The previously little known gnaphosid spider was recently found also at saline steppes and salt marsh meadows (Dudás 2001, Szita et al. 2000).

Table 1. List of spider species collected from the study sites.

Family: Uloboridae	
Uloborus walckenaerius (Latreille, 1806)	6
Family: Theridiidae	
Episinus truncatus (Latreille, 1809)	12
Euryopis quinqueguttata Thorell, 1875	6
Neottiura suaveolens (Simon, 1879)	2
Phylloneta impressa (L.Koch, 1881)	1
Similidion simile (C.L.Koch, 1836)	1
Steatoda phalerata (Panzer, 1801)	3
Family: Linypiidae	
Agyneta sp.	1
Ceratinella brevis (Wider, 1834)	4
Cresmatoneta mutinensis (Canestrini, 1868)	5
Diplostyla concolor (Wider, 1834)	16
Erigone dentipalpis (Wider, 1834)	2
Gonatium rubens (Blackwall, 1833	1
Linyphia hortensis (Sundevall, 1830)	12
Linyphia triangularis (Clerck, 1757)	4
Meioneta rurestris (C.L.Koch, 1836)	74
Micrargus apertus (O.P. –Cambridge, 1881)	1
Neriene peltata (Wider, 1834)	3
Trichoncus hackmani Millidge, 1956	2
Walckenaeria capito (Westring, 1861)	6
Walckenaeria sp.	1
Family: Tetragnathidae	
Pachygnatha clercki (Sundevall, 1823)	1
Pachygnatha degeeri Sundevall, 1830	3
Tetragnatha extensa (Linnaeus, 1758)	5
Family: Araneidae	
Araneus quadratus (Clerck, 1757)	3
Araneus diadematus Clerck, 1757	24
Argiope bruennichi (Scopoli, 1772)	38
Mangora acalypha (Walckenaer, 1802)	2
Family: Lycosidae	
Alopecosa accentuata (Latreille, 1817)	1
Alopecosa cuneata (Clerck, 1757)	3
Alopecosa pulverulenta (Clerck, 1757)	15
Arctosa leopardus (Sundevall, 1833)	1
Aulonia albimana (Walckenaer, 1805)	285
Hogna radiata (Latreille, 1817)	6

Pardosa agrestis (Westring, 1862)	31
Pardosa amentata (Clerck, 1757)	3
Pardosa hortensis (Thorell, 1872)	1
Pardosa prativaga (L. Koch, 1870)	27
Pirata latitans (Blackwall, 1841)	1
Pirata uliginosus (Thorell, 1856)	5
Trochosa robusta (Simon, 1876)	99
Trochosa ruricola (De Geer, 1778)	9
Trochosa terricola Thorell, 1856	22
Xerolycosa miniata (C.L. Koch, 1834)	2
Family: Pisauridae	
Pisaura mirabilis (Clerck, 1757)	36
Family: Oxyopidae	
Oxyopes heterophthalmus (Latreille, 1804)	1
Family: Titanoecidae	
Titanoeca veteranica Herman, 1879	1
Family: Liocranidae	
Agroeca lusatica (L. Koch, 1875)	1
Liocranoeca striata (Kulczynski, 1882)	2
Family: Corinnidae	
Phrurolithus festivus (C.L. Koch, 1835)	107
Phrurolithus minimus C.L. Koch, 1839	35
Family: Agelenidae	
Agelena labyrinthica (Clerck, 1757)	3
Family: Dictynidae	
Dictyna arundinacea (Linnaeus, 1758)	11
Dictyna latens (Fabricius, 1775)	3
Family: Miturgidae	
Cheiracanthium punctorium (Villers, 1789)	25
Family: Gnaphosidae	
Drassodes pubescens (Thorell, 1856)	9
Drassyllus praeficus (L. Koch, 1866)	38
Drassyllus pusillus (C.L. Koch, 1833)	4
Gnaphosa lucifuga (Walckenaer, 1802)	2
Gnaphosa rufula (L. Koch, 1866)	5
Haplodrassus minor (O.P.-Cambridge, 1879)	38
Haplodrassus signifer (C.L. Koch, 1839)	11
Micaria formicaria (Sundevall, 1832)	15
Micaria pulicaria(Sundevall, 1832)	1
Micaria sp.	1
Trachyzelotes pedestris (C.L. Koch, 1837)	56
Zelotes electus (C.L. Koch, 1839)	20

Zelotes gracilis Canestrini, 1868	3
Zelotes hermani (Chyzer, 1878)	5
Zelotes latreillei (Simon, 1878)	47
Zelotes sp.	1
Family: Sparassidae	
Micrommata virescens (Clerck, 1757)	1
Family: Zoridae	
Zora spinimana (Sundevall, 1833)	16
Family: Thomisidae	
Misumena vatia (Clerck, 1757)	2
Ozyptila pullata (Thorell, 1875)	3
Ozyptila simplex (O.P.-Cambridge, 1862)	3
Synema globosum (Fabricius, 1775)	1
Thomisus onustus (Walckenaer, 1806)	3
Xysticus cristatus (Clerck, 1757)	1
Xysticus erraticus (Blackwall, 1834)	1
Xysticus kochi (Thorell, 1872)	2
Family: Amaurobiidae	
Urocoras longispinus (Kulczynski, 1897)	1
Family: Philodromidae	
Philodromus aureolus (Clerck, 1757)	3
Philodromus fuscomarginatus (De Geer, 1778)	1
Philodromus margaritatus (Clerck, 1757)	1
Thanatus arenarius Thorell, 1872	23
Thanatus formicinus (Clerck, 1757)	1
Tibellus oblongus (Walckenaer, 1802)	13
Family: Salticidae	
Euophrys frontalis (Walckenaer, 1802)	3
Heliophanus cupreus (Walckenaer, 1802)	1
Heliophanus flavipes (Hahn, 1832)	1
Leptorchestes berolinensis (C.L.Koch, 1846)	1
Macaroeris nidicolens (Walckenaer, 1802)	1
Mithion canestrini (Ninni, 1868)	10
Pellenes nigrociliatus (Simon, 1875)	2
Phlegra fasciata (Hahn, 1826)	17
Talavera aequipes (O.P.-Cambridge, 1871)	1
Total:	**1344**

Orthoptera

A total of 7750 orthopteran specimens (5142 adult and 2608 juvenile) were identified from the pitfall trap, sweep netting and D-vac samples, which represent 42 species (Table 2).

The most abundant species was clearly *Melanogryllus desertus*, followed by *Euchorthippus declivus* and *Tartarogryllus burdigalensis*.

The number of species was the highest in the mosaics of loess steppes (21 species), saline meadows (22 species) and saline meadows with *Artemisia* salt steppe patches (18 species). We found two species, *Acrida hungarica* and *Epacromius coerulipes*, which are protected in Hungary. In addition, we collected two sporadic and six rare species.

Table 2. List of orthopteran species occurring in the study sites. [P]: protected species in Hungary, *: sporadic species in Hungary, **: rare species in Hungary.

Order: Ensifera	
Superfamily: Tettigonioidea	
Conocephalus discolor Thunberg, 1815	36
Decticus verrucivorus (Linnaeus, 1758)	2
Leptophyes albovittata (Kollar, 1833)	13
Leptophyes discoidalis (Frivaldsky, 1867)	1
Metrioptera bicolor (Philippi, 1830)	25
Metrioptera roeselii (Hagenbach, 1822)	10
Phaneroptera falcata (Poda, 1761)	2
Platycleis affinis Fieber, 1853	20
Platycleis grisea (Fabricius, 1781)	11
Platycleis intermedia (Serville, 1838)	1
Platycleis vittata (Charpentier, 1825)	89
Ruspolia nitidula (Scopoli, 1786) *	9
Tettigonia caudata (Charpentier, 1845)	3
Tettigonia viridissima (Linnaeus, 1758)	1
Superfamily: Grylloidea	
Gryllus campestris Linnaeus, 1758	64
Melanogryllus desertus (Pallas, 1771) **	2238
Modicogryllus frontalis (Fieber, 1844) **	9
Oecanthus pellucens (Scopoli, 1763)	25
Tartarogryllus burdigalensis (Latreille, 1804) **	463
Order: Caelifera	
Superfamily: Acridoidea	
Acrida hungarica (Herbst,1786) [P]	66
Aiolopus thalassinus (Fabricius, 1781)	185
Calliptamus italicus (Linnaeus, 1758)	1

Chorthippus brunneus (Thunberg, 1815)	18
Chorthippus dichrous (Eversmann, 1895) **	17
Chorthippus dorsatus (Zetterstedt,1821)	27
Chorthippus mollis (Charpentier, 1825)	5
Chorthippus oschei (Helversen, 1986)	275
Chorthippus paralellus (Zetterstedt, 1821)	293
Chorthippus vagans (Eversmann, 1848) **	18
Chrysochraon dispar (Germar, 1831)	3
Epacromius coerulipes (Ivanov, 1887) [P]**	6
Euchorthippus declivus (Brisout de Barneville, 1848)	865
Euchorthippus pulvinatus (Fischer de Waldheim, 1846) *	11
Euthystira brachyptera (Ocskay, 1826)	12
Omocestus haemorrhoidalis (Charpentier, 1825)	133
Omocestus petraeus (Brisout de Barneville, 1855)	8
Omocestus rufipes (Zetterstedt, 1821)	5
Pezotettix giornae (Rossi, 1794)	53
Stenobothrus crassipes (Charpentier, 1825)	113
Stenobothrus lineatus (Panzer, 1796)	1
Superfamily: Tetrigoidea	
Tetrix subulata (Linnaeu, 1758)	2
Tetratetrix tenuicornis (Shalberg, 1893)	3
Total:	**5142**

Heteroptera

A total number of 505 adult individuals of 54 species were collected by pitfall traps and D-vac sampling (Table 3).

Sweep netting or suction sampling are generally used to sample Heteroptera assemblages in grasslands (Standen 2000, Coscaron et al. 2009), pitfall trapping is not necessary (Standen 2000). Collecting true bugs from the ground-level generally needs great effort and has trifling result compared with collecting from the vegetation (Rédei et al. 2003). However, the sampling of epigeic true bugs may result important and valuable faunistical data. Several rare and new species for the Hungarian fauna were collected exclusively from the ground surface (e.g. Torma 2005). In the alkaline grasslands of Gyula, several rare true bug species were collected by pitfall traps, too. These species were mainly predaceous true bugs, e.g. *Prostemma sanguinea* (Rossi, 1790), *Alloeorhynchus flavipes* Fieber, 1836, *Himacerus* (*Stalia*) *boops* (Schiödte, 1870) and *Pirates hybridus* (Scopoli, 1763). The phytophagous species were mainly polyphagous bugs, but some specialist herbivorous true bugs were also collected, e.g. *Piesma kochiae* (Beckegur, 1867), *Sciocoris sulcatus* Fieber, 1851 and *Vilpianus galii* (Wolff,

1802). Several species preferred alkaline grassland habitats, e.g. *Lygaeosoma anatolicum* Seidenstücker, 1960 and *Henestaris halophilus* (Burmeister, 1835).

The number of collected species was low comparing with both Hungarian (e.g. Vásárhelyi 1985, Kondorosy 2000, 2003, Kondorosy and Harmat 1998) and Romanian (e.g. Kis 1972, 1976, Torma 2009a, 2009b) Heteroptera faunistical studies, however it presumably change when processing of sweep netting material will be finished.

The nomenclature of true bugs followed the work of Kondorosy (1999).

Table 3. List of true bug species collected from the study sites.

Family: Tingidae	
Acalypta marginata (Wolff, 1804)	26
Kalama tricornis (Schrank, 1801)	4
Lasiacantha gracilis (Herrich-Schäffer, 1830)	1
Family: Miridae	
Acetropis carinata (Herrich-Schaeffer, 1842)	5
Adelphocoris lineolatus (Goeze, 1778)	2
Adelphocoris ticinensis (Mayer-Dur, 1843)	1
Amblytylus concolor Jakovlev, 1877	1
Charagochilus weberi E. Wagner, 1953	1
Hallodapus rufescens (Burmeister, 1835)	1
Lygus pratensis (Linnaeus, 1758)	2
Notostira erratica (Linnaeus, 1758)	7
Omphallonotus quadriguttatus (Kirschbaum, 1856)	3
Polymerus vulneratus (Panzer, 1806)	1
Family: Nabidae	
Alloeorhynchus flavipes Fieber, 1836	1
Himacerus (*Stalia*) *boops* (Schiödte, 1870)	1
Nabis (s. str.) pseudoferus Remane, 1949	1
Nabis (s. str.) punctatus Costa, 1847	1
Nabis pseudoferus / punctatus ♂♀	3
Prostemma aeneicolle Stein, 1857	4
Prostemma g. guttula (Fabricius, 1787)	1
Prostemma sanguinea (Rossi, 1790)	28
Family: Reduviidae	
Pirates hybridus (Scopoli, 1763)	3
Family: Piesmatidae	
Piesma kochiae (Beckegur, 1867)	6
Family: Lygaeidae sensu latu	
Beosus quadripunctatus (Müller, 1766)	3
Dimorphopterus doriae (Ferrari, 1874)	177

Emblethis griseus (Wolff, 1802)	2
Graptopeltus lynceus (Fabricius, 1775)	2
Henestaris halophilus (Burmeister, 1835)	2
Lygaeosoma anatolicum Seidenstücker, 1960	41
Megalonotus chiragra (Fabricius,1787)	1
Megalonotus sabulicola (Thomson, 1870)	1
Metopoplax origani (Kolenati, 1845)	4
Microplax interrupta (Fieber, 1837)	2
Ortholomus punctipennis (Herrich-Schäffer, 1839)	2
Peritrechus gracilicornis (Puton, 1877)	3
Peritrechus nubilus (Fallén, 1807)	2
Plinthisus (*Plinthisomus*) *pusillus* (Scholtz,1846)	2
Tropistethus holosericeus (Scholtz, 1846)	4
Xanthochilus quadratus (Fabricius, 1798)	4
Family: Pyrrhocoridae	
Pyrrhocoris apterus (Linnaeus, 1758)	12
Pyrrhocoris marginatus (Kolenati, 1845)	6
Family: Rhopalidae	
Chorosoma schillingi (Schummel, 1829)	3
Myrmus miriformis (Fallén, 1807)	2
Stictopleurus crassicornis (Linnaeus, 1758)	17
Family: Cydnidae	
Geotomus punctulatus (Costa, 1847)	17
Legnotus picipes (Fallén, 1807)	30
Family: Scutellaridae	
Eurygaster maura (Linnaeus, 1758)	35
Family: Pentatomidae	
Aelia acuminata (Linnaeus, 1758)	1
Dolycoris baccarum (Linnaeus, 1758)	5
Podops inuncta (Fabricius, 1775)	4
Sciocoris cursitans (Fabricius, 1794)	7
Sciocoris distinctus Fieber, 1851	2
Sciocoris sulcatus Fieber, 1851	5
Vilpianus galii (Wolff, 1802)	3
Total:	**505**

Hymenoptera: Formicidae

A total of 9110 ant individuals (8925 workers, 128 queens and 57 males) were identified from the pitfall trap samples of July-September, which represent 25 species (Table 4), among which *Lasius nitidigaster* Seifert, 1996 is a new species for the Hungarian myrmecofauna (Lőrinczi, submitted manuscript).

The most abundant species was *Lasius paralienus*, followed by *Tetramorium cf. caespitum*, *Tapinoma erraticum* and *Myrmica slovaca*, the latter of which is a characteristic species of saline grasslands. These species, together with *Formica rufibarbis* and *F. cunicularia*, were also those that occurred almost in all habitat types. The number of species was the highest in the mosaics of loess steppes and saline meadows (up to 18 species), while the lowest in habitats consisting of Pannonic *Camphorosma* hollows and dense and tall *Puccinellia* swards (less than 8 species).

The presence of *Ponera testacea* in the collected material is worth noticing, since it has not been found in the Great Hungarian Plain so far, and only one syntopic occurrence of the two *Ponera* species has been recorded in Hungary (Csősz and Seifert 2003). *P. testacea* is widely distributed in Southern and Central Europe, where it associates with open and xerothermous grasslands, particularly those on sand, rocky limestone, dolomite and siliceous rock (Csősz and Seifert 2003, Czechowski and Radchenko 2010). The two specimens of *P. testacea* collected in Gyula were found in a habitat of loess steppe patches.

Table 4. List of ant species identified from the alkaline grasslands of Gyula.

	workers	queens	males
Subfamily: Ponerinae			
Ponera coarctata (Latreille, 1802)	-	2	-
Ponera testacea Emery, 1895	2	-	-
Subfamily: Myrmicinae			
Anergates atratulus (Schenck, 1952)	-	1	-
Myrmica gallienii Bondroit, 1920	97	23	1
Myrmica sabuleti Meinert, 1861	281	-	1
Myrmica scabrinodis Nylander, 1846	-	2	-
Myrmica slovaca Sadil, 1952	1013	37	-
Myrmica specioides Bondroit, 1918	138	2	-
Myrmica sp.	-	-	24
Solenopsis fugax (Latreille, 1798)	47	23	23
Tetramorium cf. caespitum	1470	4	-
Subfamily: Dolichoderinae			
Tapinoma erraticum (Latreille, 1798)	1158	-	-
Tapinoma madeirense Forel, 1895	146	-	-
Subfamily: Formicinae			
Camponotus atricolor (Nylander, 1849)	27	-	-
Formica cunicularia Latreille, 1798	68	-	-
Formica rufibarbis Fabricius, 1793	391	-	-
Formica sanguinea (Latreille, 1798)	15	-	-

Lasius carniolicus Mayr, 1861	1	-	-
Lasius distinguendus (Emery, 1916)	1	2	-
Lasius flavus (Fabricius, 1782)	-	2	-
Lasius fuliginosus (Latreille, 1798)	2	-	-
Lasius niger (Linnaeus, 1758)	709	1	-
Lasius nitidigaster Seifert, 1996	-	3	-
Lasius paralienus Seifert, 1992	2382	25	-
Lasius sp.	-	-	8
Plagiolepis pygmaea (Latreille, 1798)	56	1	-
Polyergus rufescens (Latreille, 1798)	921	-	-
Total:	**8925**	**128**	**57**

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