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CONTRIBUTION TO THE KNOWLEDGE ON SPIDERS (ARANEAE) IN THE SURROUNDINGS OF BANSKÁ BYSTRICA (SLOVAKIA)

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Abstract: The author deals with faunistic research of spiders (Araneae) in the suburban area of Banská Bystrica, where he has documented 233 species listed below. Despite this city is surrounded by mountains in the heart of Slovakia, the occurrence of many more-or-less thermophilous spiders is remarkable and sometimes surprising. It especially concerns *Eresus cinnaberinus, Dipoena inornata, Lepthyphantes keyserlingi, Nematogmus sanguinolentus, Trichoncus affinis, Tricca lutetiana, Phrurolithus szilyi, Zodarion rubidum, Gnaphosa bicolor, Haplodrassus kulczynskii, Micaria formicaria, Phaeocedus braccatus, Zelotes hermani, Thanatus sabulosus, Ozyptila pullata* and *Marpissa nivoyi*. On the other hand, only a few species of higher altitudes occur here; including *Diplocephalus helleri, Troxochrus nasutus, Acantholycosa lignaria* and partially *Coelotes atropos*.

Key words: spiders (Araneae), faunistics, Banská Bystrica, Central Slovakia

INTRODUCTION

Banská Bystrica is a district city situated directly in the centre of Slovakia among mountains. This region is relatively well-known from arachnological point of view – detailed research of spiders had been carried out by Svatoň in 70s especially on the hill Urpín, neighbouring the suburban area (SVATOŇ 1985). The author mentions a lot of rare, prevailingly thermophilous spider species here, including several new species for the Slovakian fauna. But Urpín itself has apparently changed its habitat structure during the last two decades, especially as a consequence of pine afforestation. Unfortunately, xerothermic communities of spiders (and also insects) of Urpín have been disappeared almost totally. Nevertheless, xerothermic habitats occur locally in another sites of suburban area; and they have not been hitherto studied from arachnological point of view. Therefore I would like to improve this data deficiency and to supplement the knowledge on spiders of the suburban area of Banská Bystrica.

MATERIAL AND METHODS

I summarise the results of my arachnological research in the suburban area of Banská Bystrica, that was ocassionally carried out during the last decade; more particularly during the years 2002 – 2004. I applied current methods of collecting, especially sifting the detritus, sweeping the spiders from the vegetation and individual collecting under stones, etc. The material was identified according the keys by MILLER (1971), HEIMER & NENTWIG (1991), ROBERTS (1995) and LOKSA (1969, 1972).

The research was carried out in the following six sites – brief characteristic is available in the table 1 (abbreviations are also used in the table 2):

Table 1: Survey of the sites

The main habitat group	Site (the grid mapping code of the Databank of the Slovakian fauna is added in brackets)	Abbr.	Brief characteristic of the habitat
»Forest« series	Urpín (7280d)	U	older, locally ancient deciduous forest (*Fa, Qu-Fa, Ti-Ac*), with clearings and little enclosures of xerothermic habitats; ecotones and forest edges
	Stará Kopa (7281c)	K	
	Laskomer (7280b/d)	L	
»Xerothermic« series	Dolná Mičiná (7381a)	M	xerothermic rocky grasslands (often pastures), dry meadows, shrubby slopes and forest edges, ecotones; deciduous forest in shady valleys (*Fagus, Corylus*), local occurrence of forest springs
	Jakub (7280b/d)	J	
	Pod Suchým vrchom (7280d)	S	

RESULTS (SYSTEMATIC REVIEW OF SPECIES)

Systematic review of spiders is available in the table 2. The scarcer spider species are often mentioned in Red Lists of several European countries; it concerns the Red List of Slovakia (GAJDOŠ & SVATOŇ 2001), Czech Republic (BUCHAR & RŮŽIČKA 2002), Germany (PLATEN et al. 1996), Slovenia (POLENEC 1992), Great Britain (MERRETT 1991), Sweden (EHNSTRÖM et al. 1993) and Finland (RASSI et al. 1992). Their ecosozological status (ESS) in separate countries is also compared in the tab. 2.

Table 2 – Spiders of the suburban area of Banská Bystrica

Family/*Species*	Site						Ekosozological status (ESS)						
	U	K	M	L	J	S	Sk	Cz	G*	Sl	GB	Sw	F
Pholcidae													
Pholcus opilionoides (Schr., 1781)						-/1			■				
Segestriidae													
Segestria senoculata (L., 1758)		1/-		-/1									
Dysderidae													
Dysdera erythrina (Walck., 1802)	1/-	1/1	-/1			1/1							
Harpactea hombergi (Scop., 1763)	2/-	1/1								VU			
Harpactea rubicunda (C. L. K., 1838)	2/-	1/1	1/-		-/1								
Eresidae													
Eresus cinnaberinus (Oliv., 1789)[1]			6/-	3/-	1/-				Sg	VU	EN		
Nesticidae													
Nesticus cellulanus (Cl., 1757) ↓	1/-									VU			
Theridiidae													
Achaearanea lunata (Cl., 1757)		-/1											
Achaearanea tepidariorum (C. L. K., 1841)		2/-											
Crustulina guttata (Wid., 1834)	-/3	1/4	-/1	1/-	1/1								
Dipoena inornata (O. P.-Cbr., 1861)[2]					1/-		EN	DD	Sg				
Dipoena melanogaster (C. L. K., 1837)	1/-	-/3							■		VU		
Enoplognatha latimana Hippa & Oks., 1982 ↓	1/-								■				
Enoplognatha ovata (Cl., 1757)	1/-	5/-											
Enoplognatha thoracica (Hahn, 1831)		2/1			-/1					VU			
Episinus angulatus (Bl., 1836) ↓	3/-								■				
Episinus truncatus Latr., 1809	-/2	2/1							■				
Euryopis flavomaculata (C. L. K., 1836)					1/1								
Keijia tincta [= *Theridion tinctum*] (Walck., 1802)	1/-									VU			
Laseola (= *Dipoena*) *tristis* (Hahn, 1833) ↓	1/1								■	VU			
Neottiura bimaculata (L., 1767)	3/-	3/1			1/-								
Pholcomma gibbum (Westr., 1851)	-/1	1/3											
Robertus arundineti (O. P.-Cbr., 1871)		-/1				1/-							
Robertus lividus (Bl., 1836)	-/4	1/3	-/1		-/2								
Robertus neglectus (O. P.-Cbr., 1871)	2/1						LR nt		■				
Steatoda bipunctata (L., 1758)		-/1											
Steatoda phalerata (Panz., 1801)			1/-						■				
Theridion impressum L. K., 1881				1/-									
Theridion mystaceum L. K., 1870		-/1							■				
Theridion pictum (Walck., 1802)	-/1								■				
Theridion sisyphium (Cl., 1757)		2/-											
Theridion varians Hahn, 1833	1/-		1/-										
Linyphiidae													
Abacoproeces saltuum (L. K., 1872) ↓	-/1	1/2							■				
Acartauchenius scurrilis (O. P.-Cbr., 1871)[3]		1/-	1/2				LR lc	VU	G				R
Bathyphantes nigrinus (Westr., 1851)	-/1	-/3											
Centromerus albidus Sim., 1929[4] ↓		-/1					LR nt				VU		
Centromerus sellarius (Sim., 1884) ↓		-/3							U				
Centromerus sylvaticus (Bl., 1841)	-/2												
Ceratinella brevis (Wid., 1834)	-/4	1/2											
Ceratinella major Kulcz., 1894 ↓				-/1					R				
Dicymbium tibiale (Bl., 1836)	-/2	1/-	-/1										
Diplocephalus cristatus (Bl., 1833)	-/3												
Diplocephalus helleri (L. K., 1869)[5]					3/-		EN		G	VU			
Diplocephalus latifrons (O. P.-Cbr., 1863)	1/-												
Diplocephalus picinus (Bl., 1864)				3/-									
Dismodicus bifrons (Bl., 1841)		-/1							■				
Diplostyla concolor (Wid., 1834)	-/2	2/5	-/1										
Entelecara acuminata (Wid., 1834)	3/-	3/-	1/-										
Entelecara flavipes (Bl., 1834)[6] ↓		-/1					VU	VU	■				
Erigone atra Bl., 1833	-/4	2/-		-/1									
Erigone dentipalpis (Wid., 1834)	1/-	1/1	2/-										
Helophora insignis (Bl., 1841)	-/2												
Hypomma bituberculatum (Wid., 1834) ↓		-/1											
Lepthyphantes keyserlingi (Auss., 1867)		-/1			1/-				G				
Lepthyphantes leprosus (Ohl., 1865)	-/1												
Lepthyphantes minutus (Bl., 1833)	-/1									VU			
Linyphia hortensis Sund., 1830		-/1											
Linyphia triangularis (Cl., 1757)	2/1	3/-											
Macrargus rufus (Wid., 1834)	1/2												
Maso sundevalli (Westr., 1851)	2/5	-/2											
Megalepthyphantes pseudocollinus Saaristo, 1997[7]		1/-					DD	EN					
Meioneta rurestris (C. L. K., 1836)	-/1												
Micrargus herbigradus (Bl., 1854)	3/2	-/1			-/1								
Micrargus subaequalis (Westr., 1851)	-/1								■				
Microneta viaria (Bl., 1841)	-/4	-/3											
Midia (= *Lepthyphantes*) *midas* (Sim., 1884)[8]	-/1						CR	EN			VU		
Minicia marginella (Wid., 1834)	1/4	3/2							G				
Moebelia penicillata (Westr., 1851) ↓	1/2						LR lc			VU			

Family/*Species*	Site						Ekosozological status (ESS)						
	U	K	M	L	J	S	Sk	Cz	G*	Sl	GB	Sw	F
Nematogmus sanguinolentus (Walck., 1841)[9]		-/1			1/-		VU	LR nt	G	VU			
Neriene clathrata (Sund., 1830)	1/1	1/-											
Neriene emphana (Walck., 1842)	-/1												
Neriene peltata (Wid., 1834)	1/1	-/1							■				
Neriene radiata (Walck., 1842)	2/1								■				
Oedothorax apicatus (Bl., 1850)	-/1	1/-											
Oedothorax fuscus (Bl., 1834)	4/2												
Ostearius melanopygius (O. P.-Cbr., 1879)	-/1												
Palliduphantes (= *Lepthyphantes*) *alutacius* (Sim., 1884) ↓	1/-												
Pocadicnemis pumila (Bl., 1841)	1/-												
Porrhomma microphthalmum (O. P.-Cbr., 1871)		-/1											
Styloctetor (= *Anacotyle*, *Ceratinopsis*) *stativus* (Sim., 1881)[10] ↓		-/1	1/1				LR lc	LR nt	G				
Tapinocyba affinis Lessert, 1907 ↓	1/1	1/2							■				
Tapinocyba biscissa (O. P.-Cbr., 1872) ↓		1/-					DD	LR nt	U				
Tapinocyba insecta (L. K., 1869)		-/1											
Tenuiphantes (= *Lepthyphantes*) *cristatus* (Menge, 1866)				1/-									
Tenuiphantes flavipes (Bl., 1854)	-/2												
Tenuiphantes mengei Kulcz., 1887	-/2												
Tenuiphantes tenebricola (Wid., 1834)	-/3												
Thyreosthenius biovatus (O. P.-Cbr., 1875)[11]	1/-						VU	DD	U				
Thyreosthenius parasiticus (Westr., 1851)	-/3												
Tiso vagans (Bl., 1834)				1/1									
Trematocephalus cristatus (Wid., 1834)	2/-		2/-						■	VU			
Trichoncus affinis Kulcz., 1894[12]		1/2						VU	G		VU		
Trichopterna cito (O. P.-Cbr., 1872) ↓						-/1			G		VU		
Troxochrus nasutus Schenk., 1925[13]	-/1						CR	VU	■	VU			
Walckenaeria acuminata Bl., 1833		1/1			1/-				■				
Walckenaeria antica (Wid., 1834)	1/2		1/-										
Walckenaeria corniculans (O. P.-Cbr., 1875) ↓	1/-	-/2							■				
Walckenaeria cucullata (C. L. K., 1836)	1/-												
Walckenaeria furcillata (Menge, 1869)				1/-					■				
Walckenaeria mitrata (Menge, 1868) ↓	1/-								U		EN		
Tetragnathidae													
Metellina mengei (Bl., 1870)	4/-	1/-											
Pachygnatha degeeri Sund., 1830	1/-												
Pachygnatha listeri Sund., 1830	-/1	1/-		-/1									
Tetragnatha montana Sim., 1874	2/-	1/-											
Tetragnatha obtusa C. L. K., 1837		1/-											
Tetragnatha pinicola L. K., 1870	1/-	1/-			2/-					VU			
Araneidae													
Aculepeira ceropegia (Walck., 1802)	1/-			-/1	-/1				■			CD	VU
Agalenatea redii (Scop., 1763)			-/1						■				
Araneus diadematus Cl., 1757	1/-	-/1				-/1							
Araneus marmoreus Cl., 1757	1/-			-/1		-/1			■				
Araneus (= *Atea*) *sturmi* (Hahn, 1831)	1/1												
Araneus (= *Atea*) *triguttatus* (F., 1775)	-/1								U			R	
Araniella cucurbitina (Cl., 1757)		1/1			1/-								
Argiope bruennichi (Pall., 1772)	-/1					1/1							
Cercidia prominens (Westr., 1851)	-/2	-/1											
Cyclosa conica (Pall., 1772)	2/-												
Gibbaranea bituberculata (Walck., 1802)	-/1	-/2							■		EN	R	
Hypsosinga pygmaea (Sund., 1831)			1/-						G				
Hypsosinga sanguinea (C. L. K., 1844)	-/2	1/1							G				
Larinioides cornutus (Cl., 1757) ↓		1/-							■	VU			
Mangora acalypha (Walck., 1802)		2/-	1/-	-/1	1/-								
Nuctenea umbratica (Cl., 1757)	-/1												
Lycosidae													
Acantholycosa lignaria (Cl., 1757)[14] ↓				-/1				EN		VU			
Alopecosa accentuata (Latr., 1817)				1/1		1/1			■				
Alopecosa cuneata (Cl., 1757)		1/-		1/-		1/-							
Alopecosa pulverulenta (Cl., 1757)			1/-										
Alopecosa trabalis (Cl., 1757)		2/-	2/-	-/1					■				
Aulonia albimana (Walck., 1805)	-/1		-/1			1/-			■		EN		R
Pardosa hortensis (Thor., 1872)	-/1								■				
Pardosa lugubris (Walck., 1802)	1/-	1/-											
Pardosa paludicola (Cl., 1757)			1/-		1/-				■		R		
Pardosa pullata (Cl., 1757)	-/1												
Pardosa riparia (C. L. K., 1833)			1/-										
Pirata hygrophilus Thor. 1872				-/1						VU			
Tricca (= *Arctosa*) *lutetiana* (Sim., 1876)[15]		1/-							■				
Trochosa terricola Thor., 1856	-/1	-/1	-/1	-/1	-/1	-/1							
Xerolycosa nemoralis (Westr., 1861)		1/-		1/-									
Pisauridae													
Pisaura mirabilis (Cl., 1757)		-/1											

Family/*Species*	Site							Ekosozological status (ESS)					
	U	K	M	L	J	S	Sk	Cz	G*	Sl	GB	Sw	F
Oxyopidae													
Oxyopes ramosus (Mart. & Goeze, 1778)[16]			1/-						G				
Zoridae													
Zora nemoralis (Bl., 1861)	1/1	1/1											
Zora spinimana (Sund., 1833)		3/2											
Agelenidae													
Agelena labyrinthica (Cl., 1757)			-/1	1/1	1-								EX
Histopona torpida (C. L. K., 1837)		1/2											
Tegenaria atrica C. L. K., 1843						-/1							
Tegenaria ferruginea (Panz., 1804)	-/1												
Tegenaria silvestris L. K., 1872	1/-												
Textrix denticulata (Oliv., 1789)		-/1							■				
Cybaeidae													
Cybaeus angustiarum L. K., 1868	-/2								■				
Hahniidae													
Antistea elegans (Bl., 1841)		1/3							■				
Hahnia helveola Sim., 1875 ↓	2/4	-/2					LR lc		R				
Dictynidae													
Argenna subnigra (O. P.-Cbr., 1871)			1/2						■				
Cicurina cicur (F., 1793)	1/1	-/2		-/1									R
Dictyna arundinacea (L., 1758)	-/1		3/1										
Dictyna latens (F., 1775)[17] ↓	-/1							EN	G				
Dictyna uncinata Thor., 1856		1/-											
Nigma flavescens (Walck., 1830)	1/-	1/-							R				
Amaurobiidae													
Amaurobius fenestralis (Ström, 1768)	-/3	2/3											
Amaurobius ferox (Walck., 1830)[18]		1/-							■			CD	
Callobius claustrarius (Hahn, 1833)		-/3							■				
Coelotes atropos (Walck., 1830)[19]				1/-					Sg				
Eurocoelotes (= *Coelotes*) *inermis* (L. K., 1855)	1/1	-/4		-/1									
Titanoecidae													
Titanoeca quadriguttata (Hahn, 1833)	3/1		1/-		1/-				■	VU		R	VU
Anyphaenidae													
Anyphaena accentuata (Walck., 1802)	-/1		1/-										
Liocranidae													
Agroeca brunnea (Bl., 1833)	-/1			-/1									
Apostenus fuscus Westr., 1851	2/-	2/1	1/-								EN		IK
Scotina celans (Bl., 1841)[20] ↓		-/1						VU	G			CD	
Clubionidae													
Clubiona compta C. L. K., 1839	1/-	1/-											
Clubiona corticalis (Walck., 1802)	-/1								■	VU			
Clubiona marmorata L. K., 1866 ↓		1/-							R				
Clubiona neglecta O. P.-Cbr., 1862 ↓				-/1									
Clubiona pallidula (Cl., 1757)	1/1												
Clubiona terrestris Westr., 1851	1/-												
Corinnidae													
Phrurolithus festivus (C. L. K., 1835)		1/1	1/-		1/-								
Phrurolithus minimus C. L. K., 1839[21]					1/-			LR nt	■				
Phrurolithus szilyi Herm., 1879)[22] ↓		3/-						CR					
Zodariidae													
Zodarion germanicum (C. L. K., 1837)			1/-						G	VU			
Zodarion rubidum Sim., 1914[23] ↓				-/1					■				
Gnaphosidae													
Callilepis nocturna (L., 1758)		-/1							G		EN		
Callilepis schuszteri (Herm., 1879)	1/-	1/-							Sg				
Drassodes lapidosus (Walck., 1802)	-/1	1/-			1/-								
Drassodes pubescens (Thor., 1856)			1/-						■				
Drassyllus (= *Zelotes*) *pusillus* (C. L. K., 1833) ↓					1/-				■	VU			
Drassyllus (= *Zelotes*) *villicus* (Thor., 1875)	-/1								G				
Gnaphosa bicolor (Hahn, 1833)	-/1								G				
Gnaphosa lucifuga (Walck., 1802)			1/2						G	VU			
Haplodrassus kulczynskii Lohm., 1942[24] ↓			-/2				LR lc		G	VU			
Haplodrassus signifer (C. L. K., 1839)	-/1		1/-	-/1	-/2								
Micaria formicaria (Sund., 1831)[25]				-/1				LR nt	G				
Micaria fulgens (Walck., 1802)			-/1						■				
Phaeocedus braccatus (L. K., 1866)[26]	-/1	-/1					LR lc	EN	Sg	VU			
Zelotes electus (C. L. K., 1839)		1/-							■				
Zelotes hermani (Chyz., 1897)[27]		-/3				-/1							
Zelotes petrensis (C. L. K., 1839)	-/1	1/1	-/5		-/1	-/1			■				
Zelotes subterraneus (C. L. K., 1833)				-/1									
Sparassidae													
Micrommata virescens (Cl., 1757)	1/-				-/1	-/1			■				
Philodromidae													
Philodromus albidus Kulcz., 1911		1/-					DD						
Philodromus aureolus (Cl., 1757)	-/1												
Philodromus caespitum (Walck., 1802)	1/-												
Philodromus dispar Walck., 1826	1/1	-/1											

Family/*Species*	Site						Ekosozological status (ESS)						
	U	K	M	L	J	S	Sk	Cz	G*	Sl	GB	Sw	F
Thanatus formicinus (Cl., 1757)		2/-	1/-		-/1				G		VU		
Thanatus sabulosus (Menge, 1875) ◄28 ↓		1/-					EN	EN	G				
Thomisidae													
Coriarachne depressa (C. L. K., 1837)	1/-								■				
Diaea dorsata (F., 1777)		-/1											
Misumena vatia (Cl., 1757)	1/1	2/1	1/-										
Misumenops tricuspidatus (F., 1775)	1/-								■				
Ozyptila atomaria (Panz., 1801)	1/-												
Ozyptila claveata (Walck., 1837) [= *nigrita* (Thor., 1875)]			1/1		-/1				G	VU			
Ozyptila praticola (C. L. K., 1837)	-/1												
Ozyptila pullata (Thor., 1875) [= *kotulai* Kulcz., 1898] ◄29 ↓						1/-		VU	G				
Synema globosum (F., 1775)	1/-				-/1				G				
Tmarus piger (Walck., 1802)	-/1		1/-						G				
Xysticus audax (Schr., 1803)	3/1												
Xysticus bifasciatus C. L. K., 1837	1/-		1/1						■				
Xysticus cristatus (Cl., 1757)	2/-	4/-	2/-	1/-									
Xysticus kochi Thor., 1872	1/-	3/-	2/-										
Xysticus lanio C. L. K., 1835			1/-						■				
Salticidae													
Ballus chalybeius (Walck., 1802)		1/-	1/-						■				
Euophrys frontalis (Walck., 1802)		1/1	1/-		-/1								
Evarcha arcuata (Cl., 1757)	4/1	3/-	1/-										
Evarcha falcata (Cl., 1757)	2/1	1/-											
Evarcha laetabunda (C. L. K., 1846)	3/-								G			CD	
Heliophanus cupreus (Walck., 1802)	2/1	5/1		1/-	1/-								
Heliophanus flavipes (Hahn, 1831)			2/-										
Marpissa muscosa (Cl., 1757) ↓		-/1							■				
Marpissa nivoyi (Luc., 1846) ◄30	3/-						LR nt	VU	VAb	VU			
Myrmarachne formicaria (De Geer, 1778) ↓				1/-				VU	■				
Neon reticulatus (Bl., 1853)	2/-	1/1							■				
Pellenes tripunctatus (Walck., 1802)		1/-	2/-						G	VU	EN		R
Phlegra fasciata (Hahn, 1826)					1/-						R		
Salticus scenicus (Cl., 1757)		1/-											
Salticus zebraneus (C. L. K., 1837)		1/-	1/-						■				
Sitticus pubescens (F., 1775)		1/1			1/-				■	VU			
Synageles venator (Luc., 1836)						-/1			■				

ESS (countries): **Sk** – Slovakia, **Cz** – Czech republic, **G** – Germany, **Sl** – Slovenia, **GB** – Great Britain, **Sw** – Sweden, **F** – Finland; ESS (categories): **Ex** – extinct, **CR** – critically endangered, **EN** – endangered, **VU** – vulnerable, **R** – rare, **CD** – care demanding, **DD** – data deficiency, **IK** – insufficiently known, **LR lc** – lower risk, least concern, **LR nt** – lower risk, near threatened; *different system of ecosozological categories is used in Germany, but it is more-or-less easily compatible with ones according to IUCN: **VAb** – 'Vom Aussterben bedroht' (it means CR according to IUCN), **Sg** – 'stark gefährdet' (≡ EN according to IUCN), **G** – 'gefährdet' (≡ VU), **R** – 'Arten mit geographischer Restriktion' (≡ LR nt), **U** – 'Arten, deren Gefährdungsstatus unsicher ist' (≡ IK), ■ – unspecified species; ◄ detailed data are supplemented below, ↓ the species is not cited from the orographic unit 'Zvolenská kotlina' basin, 2/1 – two males and one female, 1/- one male was collected, but more individuals were registered

The following species (marked by '◄' in the table) deserve special note:

1 *Eresus cinnaberinus* – Dolná Mičiná 20 April 2003, 7 ♂; Laskomer (Graniar) 28 April 2004, 3 ♂; Jakub 22 June 2004, ♂. A conspicuous species of xerothermic habitats, occurring locally and quite rarely.

2 *Dipoena inornata* – Jakub 9 April 2004, ♂. A little-known and very rare species, known from five old records from Eastern Slovakia – the end of the 19th century, Chyzer & Kulczyński lgt. (GAJDOŠ et al. 1999). The recent record is also available from 'Zvolenská kotlina' basin (GAJDOŠ & KRIŠTÍN 1997).

3 *Acartauchenius scurrilis* – Dolná Mičiná 20 April 2003, ♂ and 30 April 2004, 2 ♀; Stará Kopa 14 June 2002, ♂. A relatively rare myrmecophilous species, living almost always in the colonies of ants *Tetramorium caespitum* under stones.

4 *Centromerus albidus* – Stará Kopa, in the litter of shaded beech forest on a scree slope 11 May 2002, ♀. A rare species of shaded forests and underground habitats as well (it is very pale and little-eyed).

5 *Diplocephalus helleri* – Jakub, in the wet moss near a forest spring (a foot of Baranovo hill) 8 October 1995, 3 ♂. A scattered and rare species of shaded mountain forests.

6 *Entelecara flavipes* – Stará Kopa 11 May 2002, ♀.

7 *Megalepthyphantes pseudocollinus* – Stará Kopa, among stones in a scree forest 11 May 2002, ♂. This recently described species is usually considered to be very rare (BUCHAR & RŮŽIČKA 2002), but it may be misidentified with *M. collinus* (C. L. K., 1872); nevertheless its tibial apophysis is apparently shorter with basal lobe. The distribution of these species in Slovakia and neighbouring countries remains to be open question, the revision of voucher material is necessary.

8 *Midia midas* – Urpín, in the cavity of an old beech 10 October 1992, ♀ (V. Franc & A. Hanzelová lgt. et coll.). A little-known species with hidden way of life; it is considered to be utmost rare relict species of ancient deciduous forests (RŮŽIČKA & BOHÁČ 1991). The second record from Slovakia: Poľana Mts. – Žiarec (7382a), in a hollow oak occupied by the wood mouse (*Apodemus sylvaticus*) 25 September 1994, ♀ (V. Franc & A. Hanzelová lgt. et coll., P. Gajdoš rev.). Unpublished record is also available from the Pieniny Mts. (SVATOŇ 1990).

9 *Nematogmus sanguinolentus* – Jakub 22 June 2004, ♂; Stará Kopa 24 April 2002, ♀. A rare species of xerothermic habitats.

10 *Styloctetor stativus* – Dolná Mičiná, xerothermic grassland 20 April 2004, ♂ + ♀; Stará Kopa, clearing in a scree forest 5 July 2002, ♀. These records are remarkable – it is usually found in wet meadows and bogs (MILLER 1971; BUCHAR & RŮŽIČKA 2002).

11 *Thyreosthenius biovatus* – Urpín, in the litter at a colony of *Formica pratensis* 28 May 2000, ♂. A rare species with hidden way of life, apparently myrmecophilous.

12 *Trichoncus affinis* – Urpín 28 May 2000, ♂; Stará Kopa 14 June 2002, ♂ + 2 ♀. A rare species of xerothermic grasslands and rocky slopes.

13 *Troxochrus nasutus* – Urpín, swept from the vegetation in a forest clearing 26 May 1995, ♀ (V. Franc & A. Hanzelová lgt. et coll.). A little known species of well-preserved (sub)mountain forests, considered to be a very rare spider. Only a few further records from Slovakia are available: Balocké vrchy Mts. – 'Tlstý javor' hill (8373b) 17 July 1993, ♀; Hrochoť – Nature Reserve 'Jelšovec' (7381b), in the wet moss of a bog edge 4 June 1995, ♀; both V. Franc & A. Hanzelová lgt. et coll. Later it was found in Vtáčnik Mts. – Brložnô (7377c) 1991 undated – pitfall trap (GAJDOŠ 1997).

14 *Acantholycosa lignaria* – Laskomer, on a fallen beech stem 30 June 2004, ♀. A relatively rare species of open (sub)mountain forests; its occurrence in the site approximately only 450 m a. s. l. is remarkable.

15 *Tricca lutetiana* – Stará Kopa 24 April 2002, ♂. A rare species of xerothermic slopes and open scree forests.

16 *Oxyopes ramosus* – Dolná Mičiná 20 April 2003, ♂. A scattered and scarce species of a relatively wide range of warmer habitats.

17 *Dictyna latens* – Urpín 24 April 2000, ♀. This locally abundant species indicates xerothermic habitats.

18 *Amaurobius ferox* – Stará Kopa, under the stone in a scree forest 24 April 2002, ♂. It occurs sporadically in buildings; considered to be a synanthropic species (MILLER 1971, BUCHAR & RŮŽIČKA 2002), but perhaps it originally lives in rock fissures, tree cavities, etc.

19 *Coelotes atropos* – Laskomer 28 April 2004, ♂. This locally abundant species lives in older forests of higher altitudes; its occurrence in the site approximately only 440 m a. s. l. is remarkable.

20 *Scotina celans* – Stará Kopa 24 April 2002, ♀. It occurs sporadically and rarely in warmer open forests, both dry and wet.

21 *Phrurolithus minimus* – Jakub 22 June 2004, ♂. It occurs sporadically and infrequently in xerothermic habitats.

22 *Phrurolithus szilyi* – Stará Kopa 24 April 2004, 3 ♂. A clearly thermophilous spider, formerly had been listed among very rare species (MILLER 1971); in the Czech Republic belongs to the rarest ones (BUCHAR & RŮŽIČKA 2002). In Slovakia occurs infrequently in a lot of sites, but in the warm regions only.

23 *Zodarion rubidum* – Laskomer (Graniar), xerothermic grassland above the hospital 30 June 2004, ♀. The first record of this little known species was published from Nováky (7277c), mining dump! 1 April 1989 – 31 October 1992, 21 ♂, 5 ♀ and 9 juveniles (PEKÁR 1994). The second record also concerns strongly disturbed environment: Sered' (7772a), nickel leach dump (KRAJČA 1996). Moreover, two undated records from Malé Karpaty Mts. and 'Považské podolie' valley are mentioned (GAJDOŠ et al.1999). This obviously thermophilous species may live in a wide range of habitats, including strongly disturbed and relatively well-preserved ones. Its distribution in Slovakia and ecology remain to be open problem.

24 *Haplodrassus kulczynskii* – Dolná Mičiná 30 April 2004, 2 ♀. A quite rare, clearly thermophilous species on the northern boundary of its range.

25 *Micaria formicaria* – Laskomer (Graniar), xerothermic grassland above the hospital 5 May 1993, ♀. A rare species of warm habitats, running nimbly at ground level during sunny days.

26 *Phaeocedus braccatus* – Stará Kopa 24 April 2002, ♀. A rare species of xerothermic habitats, conspicuous due to motley coloration and nimbly motion.

27 *Zelotes hermani* – Stará Kopa 24 April 2002, 3 ♀; Pod Suchým vrchom, xerothermic pasture, ♀. A rare, clearly thermophilous species on the northern boundary of its range.

28 *Thanatus sabulosus* – Stará Kopa 14 June 2002, ♂. A very rare species of warm habitats. The first record for Slovakia was published from the Nature Reserve 'Veľká skala' (7377b) 8 July 1988, ♂ (GAJDOŠ 1991); the further records: Zemplínske vrchy Mts., unpublished (GAJDOŠ et al. 1999); Nature Reserve 'Ostrov Kopáč' (7968b) originally mentioned as "*Thanatus* sp." (GAJDOŠ 1987); and Sered' (7772a), nickel leach dump (KRAJČA 1996). The last record from anthropogenic environment is surprising and very remarkable.

29 *Ozyptila pullata* – Pod Suchým vrchom 12 April 2004, ♂. A rare, clearly thermophilous species.

30 *Marpissa nivoyi* – Urpín, 9 July 2000, 3 ♂. This species had formerly been considered to be utmost rare (MILLER 1971); recently it occurs locally and infrequently in warm habitats.

CONCLUSIONS

In this paper 233 spider species from the suburban area of Banská Bystrica are mentioned; 33 of them are not cited from this orographic unit (GAJDOŠ et al.1999). They are prevailingly more-or-less clearly thermophilous species, often rare. The most remarkable of them include *Eresus cinnaberinus*, *Dipoena inornata*, *Nematogmus sanguinolentus*, *Trichoncus affinis*, *Phrurolithus szilyi*, *Zodarion rubidum*, *Gnaphosa bicolor*, *Haplodrassus kulczynskii*, *Micaria formicaria*, *Phaeocedus braccatus*, *Zelotes hermani*, *Thanatus sabulosus*, *Ozyptila pullata* and *Marpissa nivoyi*. Ony a few species rank among ones of colder (sub)mountain habitats; it concerns *Diplocephalus helleri*, *Troxochrus nasutus*, *Acantholycosa lignaria* and *Coelotes atropos*. Referred species prove high value of this territory from both genofund and environmental point of view. Clear dominance of thermophilous species is a consequence of temperate conditions of this territory. Suburban area of Banská Bystrica is situated on the warm limestone substratum in a bend of the 'Zvolenská kotlina' basin, where a lot of thermophilous animals (and plants) come up to submountain altitudes along the Hron river valley. The list of species is only preliminary and the research of spiders in this territory will be continuing, of course.

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