

Acta entomologica serbica, 2013, 18(1/2): 17-41

UDC 595.754(497.11)

TRUE BUGS (HETEROPTERA) OF THE STARA PLANINA MOUNTAIN (SERBIA)

JELENA ŠEAT

Kralja Petra I 63, 25282 Gakovo, Serbia
E-mail: jelenaseat@yahoo.com

Abstract

During summer 2011 and spring 2012 true bug specimens (Heteroptera, Insecta) were collected in the Stara planina Mountain area, at the sites of Jabučko ravnište and the surroundings of Temska village. Nine hundred and ninety-seven specimens were collected and the presence of 176 species from 25 families was confirmed. The most significant discovery was the finding of the species *Velia (Plesiovelia) serbica* Tamanini, 1951 in Temska village, which is the first record for Serbia of this species endemic to the Balkans. New species found for the fauna of Serbia are *Heterocordylus (Heterocordylus) parvulus* Reuter, 1881, *Berytinus (Lizinus) crassipes* (Herrich-Schäffer, 1835), *Tropidophlebia costalis* (Herrich-Schäffer, 1850) and *Drymus (Drymus) pilicornis* (Mulsant & Rey, 1852). Also highly significant are the findings of the rare species *Closterotomus reuteri* (Horvath, 1882) and *Elasmucha fieberi* (Jakovlev, 1865), as well as a dozen relict species. Analysis of the bug fauna of Stara planina Mt. shows that 9% of fauna are classified as species of high conservation priority.

KEY WORDS: true bugs, Heteroptera, Stara planina Mountain, Balkan Mountain, East Serbia

Introduction

Stara planina Mountain is recognised as an area of great biodiversity richness and is regarded as one of the hotspots of endemic and relict species in Serbia (RADOVIĆ *et al.*, 1995). Systematic research of true bug fauna in the Serbian part of Stara planina Mt. was never carried out, so until now only a few species were recorded for this region (PROTIĆ, 1998, 2001). However, heteropterofauna of the Bulgarian part of the range is well known and results of their research indicate that in Stara planina Mt. some of the most interesting true bug species in Serbia are to be found.

Stara planina or Balkan Mountain, which runs 80 km along the Serbian-Bulgarian border, is the largest mountain range of eastern Serbia. Its biodiversity and landscape characteristics were instrumental in its

proclamation as a nature park in 1997 and its identification as the first category of protection. Nowadays, Nature Park "Stara planina" with its 114.332 ha and three-level system of protection (Fig. 1) is the largest protected area in Serbia (Official Gazette RS, No. 23/2009). The most valuable forests and some mountain peat bogs are in seven strict nature reserves. Ramsar convention recognises the mountain peat bogs as some of the rarest and the most vulnerable ecosystems on Earth (MIJOVIĆ, 2003). Due to its substantial altitudinal span, Stara planina Mt. vegetation is divided into five clearly defined zones: 1) zone of oak forests (400-1.000 m), 2) zone of beech forests (1.000-1.500 m), 3) zone of spruce forests (1.500-1.800 m), 4) zone of subalpine scrub (1.800-1.900 m) and 5) zone of alpine meadows and pastures (>1.900 m) (LAKUŠIĆ & ČETKOVIĆ, 2007).

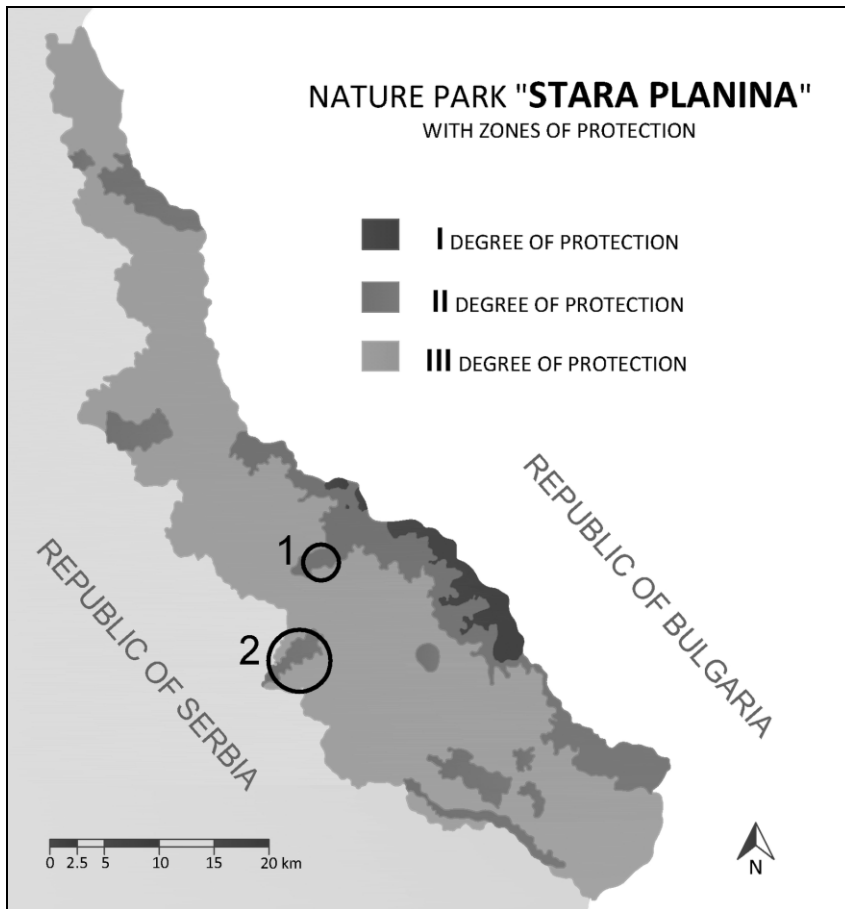


Figure 1. Nature Park "Stara planina" with zones of protection and sampling sites: (1) Jabučko ravnište and (2) Temska village surroundings.

A major contribution to research on true bugs of Stara planina Mt. in Bulgaria was made by JOSIFOV (1974). After a long period of collecting, JOSIFOV analysed dendrobiotic true bugs fauna of Stara planina Mt. and concluded that the zone of oak forests had the biggest diversity in species and that dominant species are

those of the Eurosiberian faunistic complex. Also, with a higher altitude the overall diversity diminishes and the percentage of species belonging to the Mediterranean faunistic complex decreases, while that of the Eurosiberian faunistic complex increases. Very similar results were obtained in biogeographic analyses of dendrobionic true bugs of Vitoša Mountain in Bulgaria (JOSIFOV, 1990) and Kopaonik Mountain in Serbia (JANKOVIĆ, 1963), so the general conclusions of JOSIFOV's research on Stara planina Mt. are probably applicable for the majority of mountains in the Balkan Peninsula.

Since true bugs are thermoxerophilic groups of insects, their diversity is expected to decrease with an increase in altitude (SIMOV, 2003). However, entomofauna of the Balkan Peninsula above the upper forest line is characterized by a significant presence of endemics and relicts (RADOVIĆ *et al.*, 1995). Hotspots of biodiversity and the localities of endemic and relict taxa are of prime interest, since they provide the foundation of future legal protection.

Encouraged by important results of Bulgarian heteropterists and the fact that Stara planina Mt. is already known as a biodiversity hotspot for many organisms (IPA, IBA, PBA), this paper is aimed at improving knowledge of true bugs of Stara planina Mt. and determining those species significant for future conservation.

Material and Methods

Nine hundred and ninety-seven specimens of true bugs were collected at Jabučko ravnište and around Temska village (Fig. 1) from July 2-16, 2011 and April 29 to May 5, 2012. Jabučko ravnište (43°2'N, 22°34'E) is located in the central part of the Nature Park "Stara planina" at an altitude of 1450 m. Other investigated locations are situated around Temska village (43°15'N, 22°32'E) at an altitude of 400-700 m (Fig. 2), at the western border of the protected area. In meadows and pastures the material was collected by standard sweep-netting method. In habitats dominated by bushes and in forests and waters, true bugs were collected individually.

The material was identified by Dr Ljiljana PROTIĆ and the following literature was used: AUKEMA & RIEGER (1995, 1996, 1999, 2001, 2006), HEISS & PÉRICART (2007), DERJANSCHI & PÉRICART (2005), KERZHNER (1981), KORMILEV (1943), PÉRICART (1972, 1983, 1984, 1998, 2010), PROTIĆ (1987, 1998, 2001), WAGNER (1970/71, 1975). The collection of true bugs described in this paper is stored in the Natural History Museum in Belgrade.

Results

Below is a systematic list of the species recorded at Stara planina Mountain

Nepomorpha

Nepidae

Nepa cinerea Linnaeus, 1758

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat

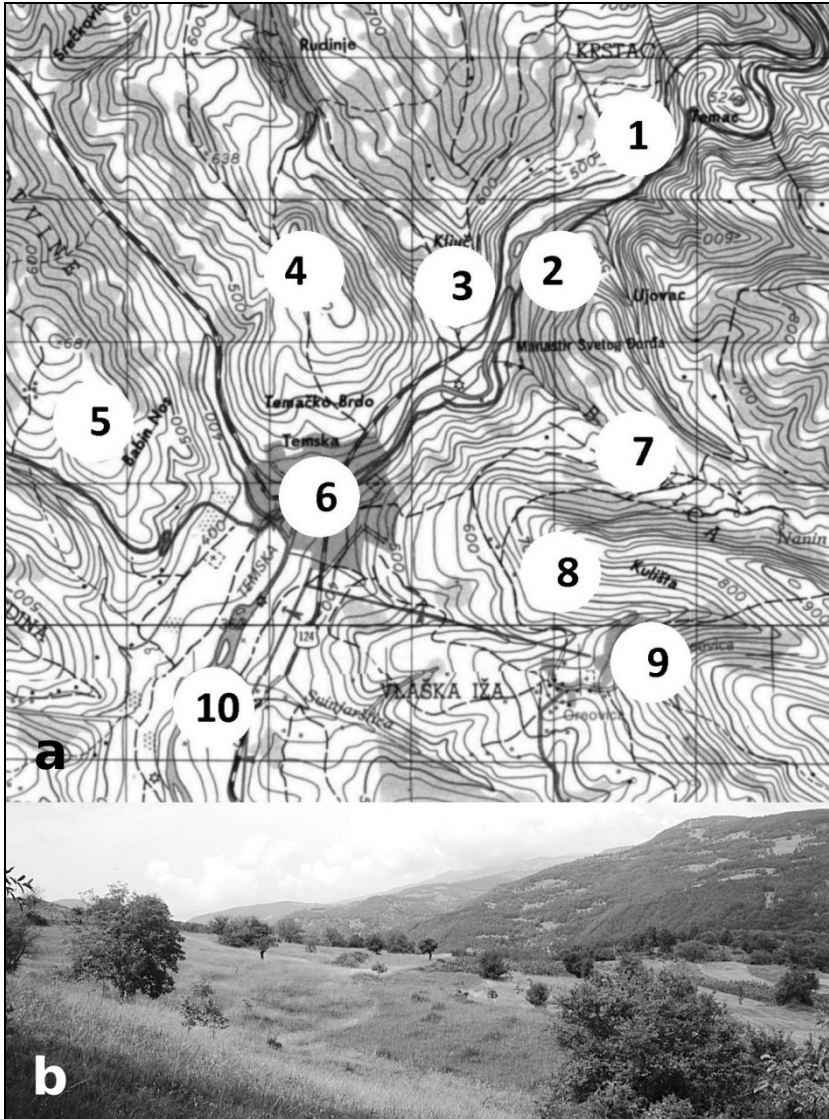


Figure 2. Investigated locations: (a) topographic map (1. Bojin dvor, 2. Bigar or Monastery Sveti Đorđe, 3. Ključ, 4. Temačko brdo, 5. Babin nos, 6. Temeška, 7. Bukovica, 8. Kulište, 9. Oreovica, 10. Tešelovac) and (b) scenery in the vicinity of Temeška village (photo: A. Simović).

Corixidae

Callicorixa praeusta praeusta (Fieber, 1848)

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat

Gerromorpha

Hydrometridae

Hydrometra stagnorum (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat

Veliidae

Velia (Plesiovelia) affinis filippii Tamanini, 1947

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat

Velia (Plesiovelia) serbica Tamanini, 1951

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat

Gerridae

Aquarius najas (De Geer, 1773)

Temska 02.07.2011. 3 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 2 ex. leg. J. Šeat,

Gerris (Gerris) costae costae (Herrich-Schäffer, 1850)

Temska: Ključ 05.05.2012. 1 ex. leg. J. Šeat

Gerris (Gerris) gibbifer Schummel, 1832

Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat

Leptopodomorpha

Saldidae

Saldula arenicola (Scholtz, 1847)

Temska: Tešlovac 03.07.2011. 1. ex. leg. J. Šeat

Saldula saltatoria (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat

Cimicomorpha

Tingidae

Agramma (Agramma) minutum Horváth, 1874

Temska: Babin nos 07.07.2011. 2 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 2 ex. leg. J. Šeat

Catoplatus carthusianus (Goeze, 1778)

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat

Catoplatus fabricii (Stål, 1868)

Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Copium clavicornis (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat

Lasiacantha capucina (Germar, 1837)

Temska: Sv. Đorđe 05.07.2011. 2 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 3 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 3 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 5 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 3 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 4 ex. leg. J. Šeat

Oncochila scapularis (Fieber, 1844)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat

Stephanitis (Stephanitis) pyri (Fabricius, 1775)

Temska: Tešlovac 29.04.2012. 2 ex. leg. J. Šeat

Tingis (Tingis) auriculata (A. Costa, 1847)

Temska: Sv. Đorđe (Bigar) 05.07.2011. 1 ex., 02.05.2012. 15 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 4 ex., 30.04.2012. 4 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 2 ex. leg. J. Šeat, Temska: Ključ 03.05.2012. 7 ex. leg. J. Šeat

Miridae

Acetropis (Acetropis) carinata (Herrich-Schäffer, 1841)

Temska 02.07.2011. 3 ex. leg. J. Šeat

Adelphocoris lineolatus (Goeze, 1778)

Temska: Ključ 04.07.2011. 4 ex. leg. J. Šeat, Oreovica 12.07.2011. 6 ex. leg. J. Šeat

Adelphocoris seticornis (Fabricius, 1775)

Temska: Tešlovac 03.07.2011. 6 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 4 ex. leg. J. Šeat

Adelphocoris vandalicus (Rossi, 1790)

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 5 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 2 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 3 ex. leg. J. Šeat

Amblytylus nasutus (Kirschbaum, 1856)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 4 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Asciodema obsoleta (Fieber, 1864)

Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat

Brachycoleus decolor Reuter, 1887

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat

Calocoris affinis (Herrich-Schäffer, 1835)

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 3 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Capsodes gothicus (Linnaeus, 1758)

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Capsus ater (Linnaeus, 1758)

Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Charagochilus (Charagochilus) gyllenhalii (Fallén, 1807)

Temska: Kulište 30.04.2012. 3 ex. leg. J. Šeat

Closterotomus reuteri (Horváth, 1882)

Temska: Ključ 05.05.2012. 1 ex. leg. M. Šćiban

Criocoris crassicornis (Hahn, 1834)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat

Deraeocoris (Deraeocoris) ruber (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 2 ex., 12.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 3 ex. leg. J. Šeat, Oreovica 12.07.2011. 3 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 3 ex. leg. J. Šeat

Deraeocoris (Deraeocoris) rutilus (Herrich-Schäffer, 1838)

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat

Deraeocoris (Deraeocoris) scutellaris (Fabricius, 1794)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat

Deraeocoris (Deraeocoris) ventralis Reuter, 1904

Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Dicyphus (Brachyceroea) annulatus (Wolff, 1804)

Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Globiceps (Kelidocoris) flavomaculatus (Fabricius, 1794)

Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Globiceps (Kelidocoris) fulvicollis Jakovlev, 1877

Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat

Heterocapillus tigrisipes (Mulsant & Rey, 1852)

Temska: Babin nos 07.07.2011. 6 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 2 ex. leg. J. Šeat

Heterocordylus (Heterocordylus) parvulus Reuter, 1881

Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 3 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 4 ex. leg. J. Šeat

Leptopterna dolabrata (Linnaeus, 1758)

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat

Liocoris tripustulatus (Fabricius, 1781)

Temska: Tešlovac 03.07.2011. 3 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 5 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Lygus pratensis (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 6 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 6 ex. leg. J. Šeat, Oreovica 12.07.2011. 5 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 3 ex. leg. J. Šeat

Monosynamma bohemani (Fallén, 1829)

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Notostira elongata (Geoffroy, 1785)

Temska: Ključ 04.07.2011. 6 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat

Orthocephalus coriaceus (Fabricius, 1777)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 2 ex. leg. J. Šeat

Orthocephalus saltator (Hahn, 1835)

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 2 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 2 ex. leg. J. Šeat

Orthops (Orthops) kalmii (Linnaeus, 1758)

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 4 ex. leg. J. Šeat

Phytocoris (Phytocoris) populi (Linnaeus, 1758)

Temska: Babin nos 07.07.2011. 2 ex. leg. J. Šeat

Plagiognathus (Plagiognathus) bipunctatus Reuter, 1883

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat,

Plagiognathus (Plagiognathus) chrysanthemi (Wolff, 1804)

Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Polymerus (Poeciloscytus) unificatus (Fabricius, 1794)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 4 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat

Polymerus (Polymerus) nigrita (Fallén, 1807)

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat

Psallus (Phylidea) ocularis (Mulsant & Rey 1852)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište, 15.07.2011. 1 ex. leg. J. Šeat

Stenodema (Brachystira) calcarata (Fallén, 1807)

Temska: Ključ 05.05.2012. 11 ex. leg. J. Šeat

Stenodema (Stenodema) holsata (Fabricius, 1787)

Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat

Stenodema (Stenodema) laevigata (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 6 ex., 03.05.2012. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe (Bigar) 05.07.2011. 1 ex., 02.05.2012. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 4 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex., 30.04.2012. 12 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 2 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 18 ex. leg. J. Šeat

Stenotus binotatus (Fabricius, 1794)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 6 ex. leg. J. Šeat Temska: Bukovica 06.07.2011. 3 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Strongylocoris leucocephalus (Linnaeus, 1758)

Jabučko ravnište 10.07.2011. 4 ex. leg. J. Šeat

Strongylocoris niger (Herrich-Schäffer, 1835)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat

Trigonotylus caelestialium (Kirkaldy, 1902)

Temska 03.07.2011. 1 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Nabidae

Himacerus (Aptus) mirmicoides (O. Costa, 1834)

Temska: Sv. Đorđe (Bigar) 11.07.2011. 3 ex. (juv.), 02.05.2012. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. (juv.) leg. J. Šeat, Temska: Kulište 30.04.2012. 4 ex. leg. J. Šeat

Himacerus (Himacerus) apterus (Fabricius, 1798)

Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Nabis (Nabicula) flavomarginatus Scholtz, 1847

Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 2 ex. leg. J. Šeat

Nabis (Nabis) brevis Scholtz, 1847

Temska: Bojin dvor 08.07.2011. 2 ex. leg. J. Šeat

Nabis (Nabis) ferus (Linnaeus, 1758)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 11.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 5 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 2 ex., 05.05.2012. 3 ex. leg. J. Šeat

Nabis (Nabis) pseudoferus Remane, 1949

Temska: Ključ 05.05.2012. 1 ex. leg. J. Šeat

Nabis (Nabis) rugosus (Linnaeus, 1758)

Temska: Tešlovac 03.07.2011. 2 ex., 29.04.2012. 5 ex. leg. J. Šeat, Temska, Sv. Đorđe (Bigar) 11.07.2011. 3 ex., 02.05.2012. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 6 ex. leg. J. Šeat, Temska: Ključ 05.05.2012. 1 ex. leg. J. Šeat

Prostemma (Prostemma) aeneicolle Stein, 1857

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Reduviidae

Phymata (Phymata) crassipes (Fabricius, 1775)

Temska: Babin nos 07.07.2011. 3 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 4 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 4 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 2 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat

Rhynocoris (Rhynocoris) iracundus (Poda, 1761)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 2 ex. leg. J. Šeat

Pentatomorpha

Aradidae

Aradus betulae betulae (Linnaeus, 1758)

Temska: Tešlovac 04.05.2012. 1 ex. leg. M. Šćiban

Aradus cinnamomeus Panzer, 1806

Temska: Tešlovac 04.05.2012. 1 ex. (juv.) leg. M. Šćiban

Aradus versicolor Herrich-Schäffer, 1835

Temska 29.04.2012. 1 ex. leg. M. Šćiban

Lygaeidae

Acompus pallipes (Herrich-Schäffer, 1834)

Temska: Kulište 30.04.2012, 1 ex. leg. J. Šeat

Acompus rufipes (Wolff, 1804)

Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temska: Ključ 03.05.2012. 7 ex. leg. J. Šeat

Beosus maritimus (Scopoli, 1763)

Temska: Bigar 02.05.2012. 3 ex. leg. J. Šeat

Beosus quadripunctatus (Müller, 1766)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Cymus claviculus (Fallén, 1807)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 3 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 2 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat

Cymus glandicolor Hahn, 1832

Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 8 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 5 ex. leg. J. Šeat

Cymus melanocephalus Fieber, 1861

Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat, Temska: Ključ 03.05.2012. 13 ex. leg. J. Šeat

Dimorphopterus spinolae (Signoret, 1857)

Temska: Ključ 03.05.2012. 1 ex. leg. J. Šeat

Drymus (Drymus) pilicornis (Mulsant & Rey, 1852)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat

Emblethis griseus (Wolff, 1802)

Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat, Temska: Ključ 03.05.2012. 1 ex. leg. J. Šeat

Heterogaster artemisiae Schilling, 1829

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Heterogaster urticae (Fabricius, 1775)

Temska 02.07.2011. 4 ex. leg. J. Šeat, Temska: Sv. Đorđe 11.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 4 ex. leg. J. Šeat

Horvathiolus superbus (Pollich, 1781)

Temska: Kulište 30.04.2012. 3 ex. leg. J. Šeat

Kleidocerys resedae (Panzer, 1797)

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat

Lygaeosoma sardeum Spinola, 1837

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Lygaeus equestris (Linnaeus, 1758)

Temska 02.07.2011. 3 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat

Nysius helveticus (Herrich-Schäffer, 1850)

Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Nysius senecionis (Schilling, 1829)

Temska: Ključ 04.07.2011. 1 ex., 05.05.2012. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 6 ex. leg. J. Šeat

Nysius thymi (Wolff, 1804)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat

Ortholomus punctipennis (Herrich-Schäffer, 1838)

Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Oxycarenus (Euoxycarenus) pallens (Herrich-Schäffer, 1850)

Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 4 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 3 ex. leg. J. Šeat

Peritrechus gracilicornis Puton, 1877

Temska: Ključ 05.05.2012. 1 ex. leg. J. Šeat

Pterotmetus staphyliniformis (Schilling, 1829)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat

Raglius alboacuminatus (Goeze, 1778)

Temska 04.05.2012. 2 ex. leg. J. Šeat

Rhyparochromus pini (Linnaeus, 1758)

Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Rhyparochromus vulgaris (Schilling, 1829)

Oreovica 12.07.2011. 1 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 2 ex. leg. J. Šeat, Temska 04.05.2012. 1 ex. leg. J. Šeat

Scolopostethus affinis (Schilling, 1829)

Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat

Spilostethus saxatilis (Scopoli, 1763)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 2 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 2 ex. leg. J. Šeat

Tropidophlebia costalis (Herrich-Schäffer, 1850)

Temška: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temška: Sv. Đorđe 11.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Piesmatidae

Piesma capitatum (Wolff, 1804)

Temška: Tešlovac 29.04.2012. 2 ex. leg. J. Šeat

Berytidae

Berytinus (Berytinus) clavipes (Fabricius, 1775)

Temška: Kulište 15.07.2011. 3 ex., 30.04.2012. 13 ex. leg. J. Šeat, Temška: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temška: Bigar 02.05.2012. 4 ex. leg. J. Šeat, Temška: Ključ 03.05.2012. 2 ex. leg. J. Šeat

Berytinus (Berytinus) minor (Herrich-Schäffer, 1835)

Temška: Sv. Đorđe 11.07.2011. 2 ex. leg. J. Šeat, Temška: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat, Temška: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Berytinus (Lizinus) crassipes (Herrich-Schäffer, 1835)

Temška: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat, Temška: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Berytinus (Lizinus) montivagus (Meyer-Dür, 1841)

Temška: Tešlovac 29.04.2012. 2 ex. leg. J. Šeat, Temška: Kulište 30.04.2012. 1 ex. leg. J. Šeat, Temška: Ključ 03.05.2012. 2 ex. leg. J. Šeat

Berytinus (Lizinus) signoreti (Fieber, 1859)

Temška: Kulište 30.04.2012. 2 ex. leg. J. Šeat, Temška: Ključ 03.05.2012. 2 ex. leg. J. Šeat

Gampsocoris culicinus culicinus Seidenstücker, 1948

Temška: Ključ 04.07.2011. 4 ex. leg. J. Šeat, Temška: Bukovica 06.07.2011. 3 ex. leg. J. Šeat, Temška: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Temška: Sv. Đorđe 11.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat, Temška: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Gampsocoris punctipes (Germar, 1822)

Temška: Bigar 02.05.2012. 1 ex. leg. J. Šeat, Temška: Ključ 03.05.2012. 1 ex. leg. J. Šeat

Neides tipularius (Linnaeus, 1758)

Temška: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat, Temška: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temška: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Pyrrhocoridae

Pyrrhocoris apterus (Linnaeus, 1758)

Temska 02.07.2011. 1 ex. leg. J. Šeat

Pyrrhocoris marginatus (Kolenati, 1845)

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Stenocephalidae

Dicranocephalus agilis (Scopoli, 1763)

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Dicranocephalus albipes (Fabricius, 1781)

Temska: Tešlovac 03.07.2011. 2 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat

Rhopalidae

Brachycarenum tigrinus (Schilling, 1829)

Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Corizus hyoscyami (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 4 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat

Liorhyssus hyalinus (Fabricius, 1794)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 1 ex. leg. J. Šeat

Maccevetthus errans caucasicus (Kolenati, 1845)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Myrmus miriformis (Fallén, 1807)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat

Rhopalus (Aeschyntelus) maculatus (Fieber, 1837)

Temska: Bukovica 06.07.2011. 2 ex. leg. J. Šeat

Rhopalus (Rhopalus) conspersus (Fieber, 1837)

Temska: Tešlovac 29.04.2012. 8 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 5 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 5 ex. leg. J. Šeat,

Rhopalus (Rhopalus) parumpunctatus Schilling, 1829

Temska 02.07.2011. 6 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 15 ex., 03.05.2012. 7 ex., 05.05.2012. 7 ex. leg. J. Šeat, Temska: Sv. Đorđe (Bigar) 05.07.2011. 3 ex., 02.05.2012. 2 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 2 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 2 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 3 ex. leg. J. Šeat, Oreovica 12.07.2011. 12 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex., 30.04.2012. 16 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 12 ex. leg. J. Šeat,

Rhopalus (Rhopalus) subrufus (Gmelin, 1790)

Temska: Tešlovac 29.04.2012. 3 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat, Temska: Ključ 05.05.2012. 4 ex. leg. J. Šeat

Stictopleurus abutilon (Rossi, 1790)

Temska: Bukovica. 06.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 2 ex. leg. J. Šeat

Stictopleurus crassicornis (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 3 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat

Stictopleurus punctatonervosus (Goeze, 1778)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 5 ex., 05.05.2012. 2 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 3 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Alydidae

Alydus calcaratus (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat

Camptopus lateralis (Germar, 1817)

Temska: Bukovica 06.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 3 ex. leg. J. Šeat

Coreidae

Bathysolen nubilus (Fallén, 1807)

Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Ceraleptus gracilicornis (Herrich-Schäffer, 1835)

Temska: Ključ 04.07.2011. 3 ex., 03.05.2012. 2 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 3 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 3 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Coreus marginatus (Linnaeus, 1758)

Temska: Tešlovac 03.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 2 ex. leg. J. Šeat

Coriomeris denticulatus (Scopoli, 1763)

Temska: Ključ 04.07.2011, 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011, 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 4 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 4 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex., 30.04.2012. 6 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 2 ex. leg. J. Šeat

Coriomeris hirticornis (Fabricius, 1794)

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Gonocerus acuteangulatus (Goeze, 1778)

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Syromastus rhombeus (Linnaeus, 1767)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 2 ex. leg. J. Šeat

Cydnidae

Canthophorus impressus (Horváth, 1881)

Temska: Kulište 30.04.2012. 3 ex. leg. J. Šeat

Cydnus aterrimus (Forster, 1771)

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat

Legnotus limbosus (Geoffroy, 1785)

Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 2 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Legnotus picipes (Fallén, 1807)

Temska: Tešlovac 29.04.2012. 2 ex. leg. J. Šeat

Tritomegas bicolor (Linnaeus, 1758)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat, Temska: Ključ 05.05.2012. 1 ex. leg. J. Šeat

Tritomegas sexmaculatus (Rambur, 1839)

Temska: Kulište 30.04.2012. 2 ex. leg. J. Šeat

Thyreocoridae

Thyreocoris scarabaeoides (Linnaeus, 1758)

Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat, Temska: Ključ 05.05.2012. 1 ex. leg. J. Šeat

Plataspidae

Coptosoma scutellatum (Geoffroy, 1758)

Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Acanthosomatidae

Elasmucha fieberi (Jakovlev, 1865)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat

Elasmucha grisea (Linnaeus, 1758)

Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat

Scutelleridae

Eurygaster maura (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 1 ex., 05.05.2012. 3 ex. leg. J. Šeat, Temska: Sv. Đorđe (Bigar) 05.07.2011. 2 ex., 02.05.2012. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 3 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex., 30.04.2012. 1 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat

Odontotarsus purpureolineatus (Rossi, 1790)

Temska: Babin nos 07.07.2011. 6 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Pentatomidae

Aelia acuminata (Linnaeus, 1758)

Temska: Ključ 04.07.2011. 2 ex., 03.05.2012. 8 ex. leg. J. Šeat, Temska: Sv. Đorđe (Bigar) 05.07.2011. 1 ex., 02.05.2012. 3 ex. leg. J. Šeat, Oreovica 12.07.2011. 3 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 1 ex., 30.04.2012. 7 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 4 ex. leg. J. Šeat

Aelia rostrata Boheman, 1852

Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 3 ex. leg. J. Šeat

Ancyrosoma leucogrammes (Gmelin, 1790)

Temska: Ključ 04.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Carpocoris (Carpocoris) fuscispinus (Boheman, 1850)

Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat

Carpocoris (Carpocoris) melanocerus (Mulsant & Rey, 1852)

Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Carpocoris (Carpocoris) pudicus (Poda, 1761)

Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat

Carpocoris (Carpocoris) purpureipennis (De Geer, 1773)

Temska: Babin nos 07.07.2011. 3 ex. leg. J. Šeat, Oreovica 12.07.2011. 2 ex. leg. J. Šeat, Temska: Kulište 15.07.2011. 3 ex., 30.04.2012. 2 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 1 ex. leg. J. Šeat, Temska: Tešlovac 29.04.2012. 4 ex. leg. J. Šeat, Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat, Temska: Ključ 05.05.2012. 2 ex. leg. J. Šeat

Dolycoris baccarum (Linnaeus, 1758)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Temska: Ključ 04.07.2011. 1 ex., 05.05.2012. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 3 ex. leg. J. Šeat, Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. J. Šeat, Temska: Tešlovac 29.04.2012. 1 ex. leg. J. Šeat

Dyroderes umbraculatus (Fabricius, 1775)

Temska 02.07.2011. 1 ex. leg. J. Šeat

Eurydema (Eurydema) oleracea (Linnaeus, 1758)

Temska: Sv. Đorđe (Bigar) 05.07.2011. 4 ex., 02.05.2012. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 5 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 2 ex. leg. J. Šeat, Temska: Ključ 03.05.2012. 1 ex. leg. J. Šeat

Eurydema (Eurydema) ornata (Linnaeus, 1758)

Oreovica 12.07.2011. 6 ex. leg. J. Šeat, Temska: Temačko brdo 16.07.2011. 2 ex. leg. J. Šeat

Eysarcoris aeneus (Scopoli, 1763)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat

Eysarcoris ventralis (Westwood, 1837)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat, Temska: Sv. Đorđe 05.07.2011. 2 ex. leg. J. Šeat, Temska: Bojin dvor 08.07.2011. 1 ex. leg. J. Šeat

Eysarcoris venustissimus (Schrank, 1776)

Temska 02.07.2011. 1 ex. leg. J. Šeat

Graphosoma lineatum (Linnaeus, 1758)

Temska 02.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Neottiglossa leporina (Herrich-Schäffer, 1830)

Temska: Sv. Đorđe (Bigar) 05.07.2011. 1 ex., 02.05.2012. 4 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Jabučko ravnište 10.07.2011. 4 ex. leg. J. Šeat, Temsk: Kulište 30.04.2012. 1 ex., leg. J. Šeat, Temska: Ključ 03.05.2012. 5 ex. leg. J. Šeat

Nezara viridula (Linnaeus, 1758)

Oreovica 12.07.2011. 1 ex. leg. J. Šeat

Palomena prasina (Linnaeus, 1761)

Temska: Sv. Đorđe 05.07.2011. 2 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Pentatoma (Pentatoma) rufipes (Linnaeus, 1758)

Temska 02.07.2011. 1 ex. leg. J. Šeat

Piezodorus lituratus (Fabricius, 1794)

Temska 02.07.2011. 1 ex. leg. J. Šeat, Oreovica 12.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Rhaphigaster nebulosa (Poda, 1761)

Temska: Ključ 04.07.2011. 1 ex. leg. J. Šeat

Sciocoris (Aposciocoris) homalonotus Fieber, 1851

Temska: Bukovica 06.07.2011. 1 ex. leg. J. Šeat, Temska: Babin nos 07.07.2011. 1 ex. leg. J. Šeat, Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Sciocoris (Aposciocoris) microphthalmus Flor, 1860

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Sciocoris (Sciocoris) cursitans cursitans (Fabricius, 1794)

Temska: Kulište 30.04.2012. 1 ex. leg. J. Šeat

Sciocoris (Sciocoris) sulcatus Fieber, 1851

Temska: Bigar 02.05.2012. 1 ex. leg. J. Šeat

Staria lunata (Hahn, 1835)

Temska: Kulište 15.07.2011. 1 ex. leg. J. Šeat

Zicrona coerulea (Linnaeus, 1758)

Temska: Kulište 15.07.2011. 3 ex. leg. J. Šeat

Discussion

Bearing in mind these evident shortcomings in methodology, the diversity recorded on Stara Planina Mt. is surprisingly high:

- Researched area constitutes only a small portion of Stara planina Mt.

- Sweep-netting as a method of true bugs collecting was applicable only in areas with herbaceous vegetation.
- Absence of continuous sampling, since most true bugs are highly associated with vegetation so faunistical composition consequently changes with the seasons.

Methodology shortcomings probably resulted in a smaller number of species being recorded and affected the faunistical composition. Despite these problems, the results are significant.

New species in Serbian fauna - *Velia serbica*, *Heterocordylus parvulus*, *Berytinus crassipes*, *Tropidophlebia costalis*, *Drymus pilicornis*.

Velia serbica is a neoendemic species of the Balkan Peninsula and was previously recorded only in Bulgaria and Macedonia. Its presence in Serbia was assumed because of the existence of optimal habitats. *V. serbica* lives exclusively in mountain streams of the Balkan Peninsula. According to the Catalogue of the Heteroptera of the Palearctic region and the Fauna Europaea database, *V. serbica* is known from Serbia and Montenegro. But this is a mistake: in fact, before our investigations it was known only from Bulgaria and Macedonia. Only our investigations confirm its presence in Serbia.

Heterocordylus parvulus is a western European species and its populations on the Balkan Peninsula are towards the eastern extreme of the species' range. In the region, *H. parvulus* was previously recorded only in Croatia. *Tropidophlebia costalis* belongs to the Eurosiberian faunistical complex and its populations in Serbia are towards the southern border of the species' range. It is common knowledge that populations towards the edge of species distribution, as is the case with *H. parvulus* and *T. costalis*, are conservation priorities and should be protected by law. In Bulgaria *T. costalis* is rare and local heteropterologists suggested legal protection of the species (GUEORGUIEV *et al.*, 1998).

Berytinus crassipes and *Drymus pilicornis* were previously recorded in the majority of neighboring countries (PROTIĆ, 1998, 2001).

Species recorded for the second time in Serbia - *Asciodema obsoleta*, *Strongylocoris niger*, *Legnotus picipes*.

Species recorded for the third time in Serbia - *Callicorixa praeusta praeusta*, *Velia affinis filippii*, *Catoplatus fabricii*, *Elasmucha fieberi*, *Aradus cinnamomeus*, *Coriomeris hirticornis*, *Acompus rufipes*.

Species last recorded in Serbia more than 50 years ago - *Saldula arenicola*, *Psallus ocellaris*, *Coriomeris hirticornis*, *Orthocephalus coriaceus*, *Strongylocoris niger*, *Acompus rufipes*.

Candidates for Heteroptera Red Book of Yugoslavia (PROTIĆ, 1993/94) - *Velia serbica*, *Closterotomus reuteri*, *Elasmucha fieberi*.

Candidates for Red Book of Yugoslavia are species suggested for legal protection by PROTIĆ (1993/94) on the basis of the previously defined criteria. Although never recorded in Serbia, *Velia serbica* was proclaimed vulnerable on the national and international level due to its very limited distribution and very specific habitat. *Closterotomus reuteri* was given certain status due to its limited Mediterranean distribution and exclusive monophagy. Populations of *Elasmucha fieberi* in the Balkan Peninsula are at the southern border of its range, so the species was proclaimed vulnerable on the national level.

C. reuteri and *E. fieberi* were also proposed for legal protection in Bulgaria (GUEORGUIEV *et al.*, 1998), but species declared 'vulnerable' in Serbia have the status 'rare' in Bulgaria. SIMOV (2003) considers a species 'rare' if its distribution is limited, populations are small, it is associated with specific habitats and requires special ecological conditions. Lists of 'vulnerable' by PROTIĆ and 'rare' by Bulgarian heteropterists have very similar categories of criteria which define them.

Beside endemic and rare species, Bulgarian heteropterists also classify relicts among species having priority for conservation and legal protection.

Relict species proposed for protection in Bulgaria (GUEORGUIEV *et al.*, 1998):

- a) Preglacial relicts - *Carpocoris melanocerus*,
- b) Glacial relicts - *Stenodema holsata*, *Globiceps flavomaculatus*, *Monosynamma bohemani*, *Berytinus crassipes*, *Nysius thymi*, *Nabis brevis*, *Nabis flavomarginatus*, *Sciocoris microphthalmus*, *Elasmucha fiberi*, *Canthophorus impressus*.

According to previously explained criteria, 16 species or 9,09% of true bugs fauna of Stara planina Mt. are species with priority for conservation; this represents a significant share, especially given the methodology shortcomings. The results show that Stara planina Mt. is very important for Serbian true bugs fauna and represents one of the biodiversity hotspots for this insect group.

Conclusion

The presence of 176 true bug species from 25 families was confirmed for Stara planina Mt. The greatest diversity was recorded for Miridae, Lygaeidae and Pentatomidae and more than half of all registered species belongs to those three families. However, percentages of those families differed in materials collected in 2011 and 2012 (Fig. 3).

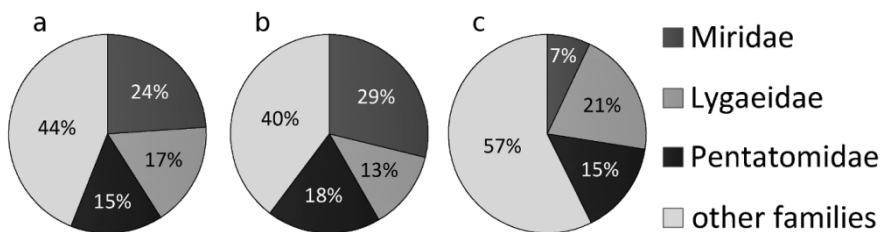


Figure 3. Percentage shares of the three most numerous true bug families in (A) the total number of recorded species, (B) species recorded in 2011 and (C) species recorded in 2012.

The large number of registered species and the significant share of conservation priority species (9,09%) validates the assumption concerning the importance of Stara planina Mt. for Serbian true bug fauna. Since insects of high mountain pastures and meadows are one of the most valuable parts of Serbian entomofauna, it is recommended that future research of true bugs on Stara planina Mt. focus on mountain peat bogs and

herbaceous vegetation above the upper forest line. Inventorying of biodiversity and the establishment of a database of endemic, rare and relict true bug taxa is a first step toward their legal protection and the protection of the areas they inhabit.

Acknowledgements

I would like to thank Dr Ljiljana PROTIĆ from the Natural History Museum in Belgrade for true bugs identifications, Dr Nikolay SIMOV from the National Museum of Natural History in Sofia for papers of Prof. JOSIFOV and our colleague Marko Ščiban for help in true bugs collecting.

References

- AUKEMA, B. & RIEGER, CH., 1995. Catalogue of the Heteroptera of the Palearctic Region 1. Netherland Entomological Society, 222 pp.
- AUKEMA, B. & RIEGER, CH., 1996. Catalogue of the Heteroptera of the Palearctic Region 2. Netherland Entomological Society, 361 pp.
- AUKEMA, B. & RIEGER, CH., 1999. Catalogue of the Heteroptera of the Palearctic Region 3. Netherland Entomological Society, 577 pp.
- AUKEMA, B. & RIEGER, CH., 2001. Catalogue of the Heteroptera of the Palearctic Region 4. Netherland Entomological Society, 346 pp.
- AUKEMA, B. & RIEGER, CH., 2006. Catalogue of the Heteroptera of the Palearctic Region 5. Netherland Entomological Society, 550 pp.
- DERJANSCHI, V. & PÉRICART, J., 2005. Hémiptères Pentatomoidea euro-méditerranéens 1. Généralités. Systématique: Première partie. Faune de France 90, 496 pp.
- GUEORGUIEV, V., BESHOVSKI, V.L., RUSSEV, B.K., KUMANSKI, K.P., JOSIFOV, M.V. & SAKALIAN, V.P., 1998. Insects of Bulgaria, Part 1: Odonata, Ephemeroptera, Plecoptera, Homoptera (Auchenorrhyncha), Heteroptera, Coleoptera. In: Meine, C. (ed.) Bulgarian's Biological Diversity: Conservation Status and Needs Assessment, Vol. 1., Biodiversity Support Program, Washington D.C., 163-209 pp.
- HEISS, E. & PÉRICART, J., 2007. Hémiptères Aradidae Piesmatidae et Dipsocoromorphes euro-méditerranéens. Faune de France 91. Paris: Fédération Française des Sociétés de Sciences Naturelles, 509 pp.
- JANKOVIĆ, LJ., 1963. Beitrag zur Kenntnis der Hemiptera-Heteroptera der Hochgebirglichen Gras - und Waldassoziationen Kopaonik (Serbien). Bulletin du Musée des Forêts et de la Chasse 3: 1-28. [in Serbian, with German s.]
- JOSIFOV, M., 1974. Dendrobionte Heteropteren im Balkangebirge. Bulletin de l'Institut de Zoologie et Musée 41: 95-105. [in Bulgarian, with Russian and German s.]
- JOSIFOV, M., 1990. Heteroptera (Insecta, Heteroptera) in the belts of the the beech, spruce and the subalpine belt of Vitoša. Fauna of Southwestern Bulgaria 3: 88-101. [in Bulgarian, with English and Russian s.]
- KERZHNER, I.M., 1981. Hemiptera of the family Nabidae. Fauna SSSR 13 (2), Leningrad, 326 pp. [in Russian]
- KORMILEV, N., 1943. V. Beitrag zur Kenntnis der Verbreitung balkanischer Hemiptera - Heteroptera (Serbien und Mazedonien). Ohridski zbornik 35, Srpska kraljevska Akademija, Posebna izdanja 86, Prirodnjački i matematički spisi 6: 123-132.

- LAKUŠIĆ, D. & ČETKOVIĆ, A. (eds.), 2007. Biodiversity of the Stara Planina Mt. in Serbia – Results of the Project: "Trans-Boundary Cooperation Through the Management of Shared Natural Resources - Promotion of Networks and Exchanges in the Countries of South-Eastern Europe". Regional Environmental Center of Central and East Europe, Office in Serbia, Belgrade, 253 pp. [in Serbian, with English s.]
- MIJOVIĆ, D. (ed.), 2003. Nature Park "Stara planina": Proposal for Conservation as Natural Resource of a Great Value. Institute for Nature Conservation of Serbia, Belgrade, 179-187 pp. [in Serbian]
- OFFICIAL GAZETTE OF THE REPUBLIC OF SERBIA, 23/2009. Regulation on the Protection of Nature Park "Stara Planina", 15 pp. [in Serbian]
- PÉRICART, J., 1972. Hémiptères. Anthocoridae, Cimicidae et Microphysidae del'ouest palearctique. Fauna del'Europe et du Bassin méditerranéen, Masson & Cie., Paris, 402 pp.
- PÉRICART, J., 1983. Hémiptères. Tingidae Euro-méditerranéens. Fauna de France 69. Fédération Française des Sociétés de Sciences Naturelles, Paris, 618 pp.
- PÉRICART, J., 1984. Hémiptères. Berytidae Euro-méditerranéens. Fauna de France 70. Fédération Française des Sociétés de Sciences Naturelles, Paris, 165 pp.
- PÉRICART, J., 1998. Hémiptères. Lygaeidae Euro-méditerranéens. Fauna de France 84 A, B, C. Fédération Française des Sociétés de Sciences Naturelles, Paris, vol. 1 457 pp., vol. 2 453 pp., vol. 3 487 pp.
- PÉRICART, J., 2010. Hémiptères Pentatomoidea Euro-Méditerranéens (Bd. 3) Podopinae et Asopinae. Faune de France 93, 290 pp.
- PROTIĆ, LJ., 1987. Hemiptera-Heteroptera Colletion of Nicolas A. Kormilev in Natural History Museum in Belgrade. Bulletin of the Natural History Museum, Special issue 35, Belgrade, 100 pp.
- PROTIĆ, LJ., 1993/94. The Heteroptera species recommended for the Yugoslav Red data book. Bulletin of the Natural History Museum B, 48: 7-32. [in Serbian, with English s.]
- PROTIĆ, LJ., 1998. Catalogue of the Heteroptera fauna of Yugoslav countries, Part one. Natural History Museum, Special issue 38, Belgrade, 215 pp.
- PROTIĆ, LJ., 2001. Catalogue of the Heteroptera fauna of Yugoslav countries, Part two. Natural History Museum, Special issue 39, Belgrade, 272 pp.
- RADOVIĆ, I., MESAROŠ, G., PAVIČEVIĆ, D., MIHAJLOVIĆ, LJ., PROTIĆ, LJ. & ČETKOVIĆ, A., 1995. Diversity of insect fauna (Insecta) of Yugoslavia with review of internationally important species. In: Stevanović, V., Vasić, V. (eds.), Biodiversity of Yugoslavia with review of internationally important species. Faculty of Biology, Ecolibri, Belgrade, 371-406 pp. [in Serbian]
- SIMOV, N., 2003. Diversity and Conservation Value of Heteroptera (Insecta) in the Rila Monastery Nature Park. In: Peev, D. (ed.) Rapid Ecological Assessment of the Rila Monastery Nature Park. American Agency for International Development, Ministry of Enviroment and Waters, Republic of Bulgaria, 117-133 pp. [in Bulgarian, with English s.]
- WAGNER, E., 1970/71. Die Miridae Hahn, 1831 des Mittelmeerraumes und der Makaroneischen Inseln (Hemiptera, Heteroptera). Entomologische abhaldungen, Supplement, 39 pp.
- WAGNER, E., 1975. Die Miridae Hahn, 1831 des Mittelmeerraumes und der Makaroneischen Inseln (Hemiptera, Heteroptera). Entomologische abhaldungen, Supplement, 40 pp.

СТЕНИЦЕ (HETEROPTERA) СТАРЕ ПЛАНИНЕ (СРБИЈА)

ЈЕЛЕНА ШЕАТ

Извод

Током лета 2011. и пролећа 2012. године сакупљане су стенице (Heteroptera) на подручју Старе планине, и то на локалитетима Јабучко равниште и у околини села Темска. Сакупљено је 997 јединки и утврђено присуство 176 врста из 25 породица. Најзначајнији је налаз балканског ендема, врсте *Velia (Plesiovelia) serbica* Tamanini, 1951 у селу Темска, што је и први налаз дате врсте у Србији. Нове врсте у фауни Србије су и *Heterocordylus (Heterocordylus) parvulus* Reuter, 1881, *Berytinus (Lizinus) crassipes* (Herrich-Schäffer, 1835), *Tropidophlebia costalis* (Herrich-Schäffer, 1850), *Drymus (Drymus) pilicornis* (Mulsant & Rey, 1852). Значајно је поменути да су на Старој планини узорковане јединке ретких врста *Closterotomus reuteri* (Horváth, 1882) и *Elasmucha fieberi* (Jakovlev, 1865), као и десетак реликата. Анализом фауне стеница са Старе планине утврђено је да 9% фауне чине конзервационо приоритетни таксони.

Received February 28th, 2013
Accepted October 21st, 2013