

## The subfamily Pselaphinae (Coleoptera: Staphylinidae) of Southwestern Bulgaria. I

Rostislav BEKCHIEV

BEKCHIEV R. 2008. The subfamily Pselaphinae (Coleoptera: Staphylinidae) of Southwestern Bulgaria. I. – *Historia naturalis bulgarica*, **19**: 51-71.

**Abstract.** So far 85 species of Pselaphinae have been established in Southwestern Bulgaria. The genera *Faronus* and *Reichenbachia*, 17 species and one subspecies are new to the Bulgarian fauna. For the first time in the same region records for 8 other species and data about Sandanski – Petrich Valley (31 species), Belasitsa Mts. (15 species), Malashevska Mts. (12 species) are reported. Species with Balkan, European and Southeast European distribution are the most numerous in Southwestern Bulgaria. The aedeagus and antennal base of *Bryaxis islamitus* are illustrated for the first time.

**Key words:** Coleoptera, Pselaphinae, Bulgaria, distribution, zoogeography, *Bryaxis islamitus*

### Introduction

Formally, the Southwestern part of Bulgaria is defined as the valley of Struma River and the surrounding mountains belonging to the Plansko-Zavalska, Kraishtenska and Osogovo-Belasishka mountain chains, Rila Mountain and Pirin Mountain (Fig. 1).

This part of the country's territory is extremely interesting from faunistic and zoogeographical point of view. It includes parts of the South Bulgarian and the Mountainous biogeographical regions, in which there are established zones with a pronounced Mediterranean climatic influence, which decreases and disappears with increase of altitude in the mountains (GRUEV, 1988). That variety of climatic and biotic factors is a prerequisite for increase in biodiversity and provides grounds for a thorough investigation in regard to Pselaphinae. Such study has not been performed up to now. Nevertheless, in the course of time a significant amount of data of considerable faunistic and zoogeographical interest has been accumulated.

The present paper aims to summarize all available data on Pselaphinae found in these regions. All literature sources, as well as new and unpublished data coming from collections of different European natural history museums and private collections are presented. The information is also supplemented with author's personal collections from this region gathered in the period 2003-2007. This article does not include supertribe Batrisitae and Clavigeritae, which will be published elsewhere. The data for general geographic distribution of species is presented in alphabetical order after LÖBL & BESUCHET (2004).



Fig. 1. Mountains and localities in Southwestern Bulgaria: 1 – Vitosha Mts.; 2 – Lyulin Mts.; 3 – Karvav Kamak Mts.; 4 – Zemen Mts.; 5 – Konyavska Mts.; 6 – Osogovska Mts.; 7 – Vlahina Mts.; 8 – Malashevska Mts.; 9 – Ograzhden Mts.; 10 – Belasitsa Mts.; 11 – Slavyanka Mts.; 12 – Struma Valley, Rupite place; 13 – Kresna Gorge (after NIKOLOV & JORDANOVA (2002) with modifications).

Abbreviations: HNHM – Hungarian Natural History Museum, Budapest; MHNG – Muséum d'histoire naturelle, Genève; NMNHS – National Museum of Natural History, Sofia; ZMHB – Museum für Naturkunde der Humboldt Universität, Berlin; SNHM – Slovak National museum, Natural History Museum, Bratislava; DEI – Deutsches Entomologisches Institut, Eberswalde; PCPH – collection Peter Hlaváč, Košice; PCRB – collection Rostislav Bekchiev, Sofia; PCVB-collection Volker Brachat, Geretsried; \* – new species for Bulgaria; \*\* – new genus for Bulgaria.

### List of species

#### **\*\**Faronus parallelus* Besuchet, 1958**

**Pirin Mts.**, near Kalimantsi, St. Ilya hill, 500 m, pitfall trap, 08 – 28.09.2002, 1 ♂, leg. M. Langurov; Ilindentsi, in leaf litter, 300 m, N 41°38'747" E 23°13'558", 08.09.2006, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: Croatia, Cyprus, Greece, Israel, Lebanon and Turkey. Mediterranean species.

***Euplectus kirbii* Denny, 1825**

Varna (KARAMAN, 1969), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Sofia**, Borissova Gradina Park, 550 m, 16.03.2004, 4 ♂♂, 1 ♀; **Lozen Mts.**, near St. Spas Monastery, under bark of *F. sylvatica*, 900 m, 02.04.2005, 1 ♀, leg. R. Bekchiev (PCRB); **Osogovo Mts.**, 1 ♂, 1928, leg. Biro (HNHM); **Zemen gorge**, near Zemen, bank of Struma River, in old trunk, rotten wood, 570 m, 02.05.2004, 3 ♂♂, 3 ♀♀; **Kresna gorge**, near Kresna, bank of Vlahinska River, in rotten wood of *Populus* sp., 09.09.2006, 2 ♂♂, 4 ♀♀; **Pirin Mts.**, Ilindentsi, in rotten wood, 300 m, 08.09.2006, 1 ♂; **Petrich District**, Rupite, bank of Struma River, in rotten wood, 90 m, 15.04.2006, 1 ♂, 1 ♀; 06.09.2006, 6 ♂♂, 2 ♀♀; **Belasitsa Mts.**, Klyuch, in rotten wood of *Platanus orientalis* L., 500 m, 07.07.2006, 1 ♂; 04.09.2006, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: entire Europe, Asia (Cyprus, Turkey and Russia – West Siberia). European-Siberian species.

***Euplectus nanus* (Reichenbach, 1816)**

Rila Mts. – Panichishte (LAPEVA-GJONOVA, 2004).

Distribution: common European species.

***Euplectus mutator* Fauvel, 1895**

German (RAMBOUSEK, 1909).

Distribution: entire Europe, Asia (Russia – Far East and East Siberia). European-Siberian species.

***Euplectus karstenii* (Reichenbach, 1816)**

Sliven (RAMBOUSEK, 1909), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Sofia**, Borissova Gradina Park, 550 m, 16.07.2004, 2 ♂♂; 16.03.2005, 1 ♂; **Zemen gorge**, near Zemen, riverside Struma River, in old trunk, rotten wood, 570 m, 01.05.2004, 2 ♀♀; **Kresna gorge**, near Kresna, bank of Vlahinska River, in rotten wood of *Populus* sp., 08.07.2006, 2 ♀♀; 09.09.2006, 2 ♂♂, 5 ♀♀; **Petrich District**, Rupite, bank of Struma River, in rotten wood, 90 m, 15.04.2006, 11 ♂♂, 10 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Europe and Asia (Russia, Iran, Turkey) and North Africa (Algeria, Morocco). Cosmopolitan species, introduced in North America and Australia.

***Euplectus bonvouloiri naretinus* Reitter, 1882**

Bulgaria (LÖBL & BESUCHET, 2004).

**Petrich District**, Rupite, bank of Struma River, in rotten wood, 90 m, 15.04.2006, 4 ♂♂, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: Central and Southeast Europe. Central-South European species.

***Euplectus frater* Besuchet 1964**

Lozen Mts. (LAPEVA-GJONOVA, 2004)

New localities: **Vitosha Mts.**, above Rudartsi, Tserova Polyana, in rotten wood of *Quercus* sp., 1100 m, 06.04.2005, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Bulgaria, Croatia, Greece, Hungary, Montenegro, Italy, Romania, Slovakia, Ukraine, Serbia and Turkey. Southeast European species.

***Euplectus sanguineus* Denny 1825**

Bulgaria (LÖBL & BESUCHET, 2004).

**Zemen gorge**, near Zemen, bank of Struma River, in old trunk, rotten wood, 570 m, 27.09.2003, 2 ♀♀, leg. D. Gradinarov (PCRB).

Distribution: common and widespread species in almost entire Europe, Asia (Cyprus, Israel, Lebanon, Turkey) and North Africa (Canary Islands, Madeira Archipelago). European-Mediterranean species. Probably introduced in the Canary Islands and Madeira Archipelago.

***Euplectus signatus* Reichenbach 1816**

Vitosha Mts. (LAPEVA-GJONOVA, 2004).

New localities: **Zemen gorge**, near Zemen, bank of Struma River, 570 m, 27.09.2003, 1 ♂, 1 ♀; in nest of *Formica* sp., 02.05.2004, 2 ♂♂, leg. R. Bekchiev (PCRB).

Distribution: almost entire Europe and Asia (Russia – West Siberia and Far East, Israel, Kyrgyzstan). European-Siberian species.

***Euplectus brunneus* (Grimmer, 1814)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Lyulin Mts.**, near Sv. Kral Monastery, in leaf litter, 26.06.1943, 1 ex., (NMNHS); **Vitosha Mts.**, above Knyazhevo, in rotten wood of *Pinus sylvestris* L., 660 m, 28.04.2005, 2 ♂♂; 13 - 15.05.2005, 3 ♂♂, 2 ♀♀; 14.07.2006, 1 ♂, 3 ♀♀; 28.04.2006, 3 ♂♂, 3 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: entire Europe. European species.

***Euplectus frivaldszkyi* Saulcy, 1878**

Bulgaria (LÖBL & BESUCHET, 2004).

**Belasitsa Mts.**, Klyuch, in rotten wood of *P. orientalis*, 500 m, 06.07.2006, 1 ♀; 08.08.2006, 4 ♂♂, 5 ♀♀; 04.09.2006, 3 ♂♂, 4 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Balkan Peninsula, Austria, Hungary, Slovenia, Slovakia and Ukraine. Southeast European species.

**\**Euplectus infirmus* Raffray, 1910**

**Vitosha Mts.**, above Knyazhevo, in rotten wood of *P. sylvestris*, 700 m, N 42°39'062" E 23°14'347", 26.07.2005, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: entire Europe, North Africa (Canary Islands, Morocco). European-Mediterranean species.

***Plectophloeus fischeri* (Aubé, 1833)**

Rila Mts. – Borovets (RAMBOUSEK, 1909; KARAMAN, 1962), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Vitosha Mts.**, between Zlatnite Mostove and Vladaya, 1300 m, in rotten wood, 17.05.2005, 1 ♂, leg. R. Bekchiev (PCRB); **Rila Mts.**, Borovets, 07.06.1967, 1 ♂, 2 ♀♀, leg. C. Besuchet (MHNG); **Belasitsa Mts.**, Belasitsa Hut, in rotten wood of *Castanea sativa* Mill., 710 m, 23.08.2003, 4 ♀♀, leg. D. Gradinarov (PCRB).

Distribution: entire Europe. European species.

**\*Plectophloeus nitidus (Fairmaire, 1858)**

**Belasitsa Mts.**, Belasitsa Hut, in rotten wood of *C. sativa*, 710 m, 23.08.2003, 1 ♂, 4 ♀♀, leg. E. Chehlarov; between Yavornitsa and Klyuch, in rotten wood of old trunk, 400 m, 04.09.2006, 13 ♂♂, 14 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: entire Europe, Asia (Iran and Turkey). European-Turanian species.

**\*Plectophloeus rhenanus (Reitter, 1882)**

**Vitosha Mts.**, above Knyazhevo, in rotten wood of *P. sylvestris*, 700 m, N 42°39'062" E 23°14'347", 14.07.2006, 1 ♂, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: The species is so far known from Austria, Bosnia and Herzegovina, Czech Republic, France, Germany, Greece, Romania, Slovakia and Switzerland. European species.

**Bibloporus bicolor (Denny, 1825)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Vitosha Mts.**, near Selimitsa Hut, under bark of *Picea abies* L., 1450 m, 1 ♂, 1 ♀, leg. R. Bekchiev (PCRB); **Rila Mts.**, Rila Monastery, 1929, 2 ♂♂, leg. Fodor (HNHM).

Distribution: entire Europe, Asia (Russia – Far East). European-Siberian species.

**Bibloporus minutus Raffray, 1914**

Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Sofia**, Borissova Gradina Park, 550 m, 10.03.2002, 2 ♀♀; **Lozen Mts.**, near St. Spas Monastery, under bark of *F. sylvatica*, 02.04.2005, 1 ♀, leg. R. Bekchiev (PCRB)

Distribution: entire Europe, Asia (Russia – Far East). European-Siberian species.

**Bibloporus mayeti Guillebeau, 1888**

Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Vitosha Mts.**, above Knyazhevo, in rotten wood of *P. sylvestris*, 660 m, 22.08.2006, 1 ♂; Zheleznitsa, Brezite, under bark of *P. abies* L. 1200 m, 1 ♂; near Kamen Del Hut, under bark of *F. sylvatica* L., 1400 m, 16.07.2006, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: entire Europe. European species.

**\*Biblopectus minutissimus (Aubé, 1833)**

**Konyavska Mts.**, near Choklyovo marsh, 12.05.2005, 1 ♀, leg. P. Mitov (PCRB).

Distribution: Central and North Europe. European species.

**Biblopectus tenebrosus Reitter, 1880**

German Monastery (RAMBOUSEK, 1909).

Note: Since Rambousek this species has not been found in Bulgaria. New material is needed to confirm its occurrence in the country.

**Biblopectus parvulus Besuchet, 1975**

Bulgaria (LÖBL & BESUCHET, 2004).

**Petrich District**, Rupite, bank of Struma River, in old alluvium, 16.05.2007, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Bulgaria, Greece, Turkey. Ponto-Mediterranean species.

***Biblopectus ambiguus* Reichenbach, 1816**

Sofia (BESUCHET, 1955).

Distribution: common species for Europe. European species.

***Trichonyx sulcicollis* (Reichenbach, 1816)**

Rila Mts. – Rila Monastery, Varna (KARAMAN, 1969), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

Distribution: entire Europe and Asia (East Siberia). European-Siberian species.

***Amauronyx maerkelii* (Aubé, 1844)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Pirin Mts.**, Ilindentsi, in leaf litter, 300 m, 08.07.2006, 3 ♂♂, 1 ♀; 08.09.2006, 4 ♂♂, 2 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: entire Europe. European species.

***Trimium puncticeps* Reitter, 1880**

Osogovo Mts., Rila Mts. – Samokov (KARAMAN, 1967), Vitosha Mts. (LAPEVA-GJONOVA, 2004; BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Zemen gorge**, near Zemen, riverside Struma River, in leaf litter of *F. sylvatica*/*Salix* sp., 570 m, 13.09.2002, 3 ♀♀; 02.05.2003, 2 ♂♂, 2 ♀♀; 02.05.2004, 3 ♂♂, 1 ♀; 26.07.2004, 2 ♂♂, 1 ♀; 13.09.2004, 2 ♂♂; **Konyavska Mts.**, near Blateshnitsa, in leaf litter of *Quercus* sp., 02.07.2005, 1 ♂, 7 ♀♀, leg. R. Bekchiev (PCRB); **Sandanski**, 16.07.1971, 1 ♂, leg. Bohac (MHNG); **Petrich District**, Rupite, Kozhuh hill, 100 m, in leaf litter of *Quercus* sp., 15.05.2007, 1 ♂, 3 ♀♀; **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 06.07.2006, 1 ♂; 04.09.2006, 2 ♂♂, 1 ♀; between Yavornitsa and Klyuch, in leaf litter, 420 m, 08.08.2006, 10 ♂♂, 1 ♀; Kamena, in leaf litter, 430 m, 3 ♂♂, 6 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Hungary, Macedonia, Moldavia and Romania. Carpathian-Balkan species.

***Trimium carpathicum* Saulcy, 1875**

Osogovo Mts., Sofia (KARAMAN, 1967), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Malashevska planina Mts.**, Gorna Breznitsa, pitfall trap in *P. orientalis* forest, 01.05 – 20.06.2002, 1 ♂, leg. B. Guéorguiev (NMNHS); **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 15.05.2007, 1 ♂, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: Southeast and Central Europe. Southeast European species.

***Trimium caucasicum* Kolenati, 1846**

Vitosha Mts. – Kniazhevo, Rila Mts. – Borovets, German (RAMBOUSEK, 1909).

New localities: **Vitosha Mts.**, in leaf litter of *F. sylvatica*, 27.08.1943, 1 ♂ (NMNHS); **Kresna gorge**, near Stara Kresna, bank of Struma River, in leaf litter, 05.06.2006, 1 ♂, 1 ♀; **Malashevska Mts.**, between Mikrevo and Kamenitsa, in leaf litter, 250 m, in leaf litter of *Quercus coccifera* L., 03.06.2006, 5 ♂♂; **Petrich District**, Rupite, in rotten wood of *Populus* sp., 93 m, 07.05.2004, 1 ♂; **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 06.07.2006, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: The species is so far known from Armenia, Georgia, Greece, Russia – the Caucasus, and Turkey. Pontic species.

Note: Our suggestion (BEKCHIEV & SHISHINIOVA, 2007), that the species could not be found in Vitosha Mountain, turned out to be wrong. Although it had not been detected in our researches in the period between 2003-2007, a finding of one male specimen in the collection of the National Museum of Natural History, Sofia, backed up the possibility of the meeting of this species also in the north of the Kresna Gorge and confirmed the identification by RAMBOUSEK (1909).

**\**Trimium expandum* Reitter, 1884**

**Malashevskia planina Mts.**, near Kamenitsa, 200 m, in pitfall trap, 31.05 – 23.06.2002, 1 ♂, leg. M. Langurov; **Pirin Mts.**, near Kalimantsi, St. Ilya hill, 500 m, tree trap, 10.05 – 01.06.2002, 1 ♂, leg. M. Langurov (PCRB); MSS trap, 27.06.–07.12.2006, 1 ♂, leg. S. Lazarov (NMNHS).

Distribution: Greece and Macedonia. Balkan species.

**\**Trimium thessalicum* Karaman, 1967**

**Pirin Mts.**, near Kalimantsi, St. Ilya hill, 500 m, tree trap, 10.05 – 01.06.2002, 1 ♂, leg. M. Langurov; pitfall trap, 23.06. – 06.08.2002, 1 ♂, leg. D. Chobanov (PCRB); **Petrich District**, Rupite, Kozhuh hill, 100 m, in leaf litter of *Quercus* sp., 15.05.2007, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Greece and Macedonia. Balkan species.

***Bryaxis simoni* (Reitter, 1880)**

Rila Mts.(REITTER, 1880; RAMBOUSEK, 1909), Stara Planina Mts. (KARAMAN, 1957, 1969) Vitosha Mts. (RAMBOUSEK, 1909, BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Lyulin Mts.**, near Sv. Kral Monastery, in leaf litter, 26.06.1943, 3 ♂♂ (NMNHS); **Zemen gorge**, near Zemen, bank of Struma River, in leaf litter of *F. sylvatica*/*Salix* sp., 570 m, 02.05.2004, 1 ♂, leg. R. Bekchiev (PCRB); **Konyavska Mts.**, near Dvorishte, in leaf litter *Quercus* sp., 02.07.2005, 1 ♂, leg. R. Bekchiev (PCRB); **Rila Mts.**, Rila Monastery, 14.07.1927, 2 ♂♂, leg. Fodor (MHNG); Maliovitsa Hut, 2185 m, 24.06.1997, 2 ♂♂, 1 ♀, leg. Zerche & Behne; Macedonia Hut, north of Parangalitsa Reserve, 1 ♂, leg. Zerche & Behne (DEI); Parangalitsa Reserve, in leaf litter of *F. sylvatica*/*P. abies*, 1500 m, 23.11.2003, 1 ♂, leg. A. Gjonova (PCRB); **Pirin Mts.**, Vihren Hut, 2080 m, 27.08.1979, 4 ♂♂, leg. P. Beron (NMNHS); Banderitsa Hut, in leaf litter, 1800 m, 9 ♂♂, 24 ♀♀, 13.06.1989, leg. C. Besuchet (MHNG); Banderitsa Hut, in moss, 27.06.1979, 1 ♂, leg. Muhlig (ZMHB).

Distribution: Bosnia and Herzegovina, Bulgaria, Greece, Macedonia, Montenegro and Serbia. Balkan species.

***Bryaxis carinula* (Rey, 1888)**

Shumen, Varna (KARAMAN, 1969, 1972a), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Zemen gorge**, near Zemen, bank of Struma River, in leaf litter of *F. sylvatica*/*Salix* sp., 570 m, 14.10.2002, 4 ♀♀, leg. D. Gradinarov (PCRB); **Rila Mts.**, Borovets mountain resort, 1911, 3 ♂♂, leg. M. Hilf (MHNG).

Distribution: Southeast and Central Europe. Southeast European species.

***Bryaxis puncticollis* (Denny, 1825)**

Rila Mts., Borovets mountain resort (= Chamkoriya) (RAMBOUSEK, 1909).

Note: The species is very similar to *Bryaxis carinula*, from which it differs solely in the morphology of the aedeagus. The presence of this species in the Bulgarian fauna needs to be confirmed.

**\**Bryaxis comita* (Rambousek, 1909)**

**Osogovo Mts.**, 1928, 2 ♂♂, 1 ♀, leg. Biro (MHNG); **Malashevskia Mts.**, Gorna Breznitsa, pitfall trap, 700 m, 23.08 – 25.09.2002, 1 ♂, leg. B. Guéorguiev (PCRB).

Distribution: Albania, Greece, Macedonia, Montenegro and Serbia. Balkan species.

***Bryaxis curtisii orientalis* Karaman, 1952**

Rila Mts., Samokov (KARAMAN, 1957, 1969), Vitoshka Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Zemen gorge**, near Zemen, Struma riverside, in leaf litter of *F. sylvatica*/*Salix* sp., 570 m, 04.09.2002, 3 ♀♀; 01-02.05.2003, 3 ♂♂, 1 ♀; 13.09.2004, 2 ♂♂; **Rila Mts.**, Rila Monastery, 11.07.1957, 1 ♂, leg. N. Karnoschitzky (NMNHS); **Malashevskia Mts.**, Gorna Breznitsa, pitfall trap in *P. orientalis* forest, 700 m, 14.09-22.10.2003, 1 ♂; 02.10-04.11.2003, 3 ♂♂, 1 ♀, leg. B. Guéorguiev (NMNHS); **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 06.07.2006, 1 ♂; 08.08.2006, 1 ♂; Kamena, in leaf litter, 430 m, 14.04.2006, 4 ♂♂, 5 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Southeast and Central Europe. Southeast European species.

**\**Bryaxis bosnicus* (Ganglbauer, 1895)**

**Vitoshka Mts.**, near Bay Krastyo, in leaf litter of *F. sylvatica*, 1450 m, 24.04.2005, 1 ♂; 27.09.2005, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Albania, Bosnia and Herzegovina, Greece, Macedonia, Montenegro and Serbia. Balkan species.

***Bryaxis convexus* (Kiesenwetter, 1858)**

Pirin Mts. – Smokovo (LÖBL, 1969).

New localities: **Malashevstka Mts.**, Sedelets, pitfall trap in *Quercus* sp. forest, 680 m, 04.05-04.07.2003, 1 ♂, leg. S. Lazarov & T. Ljubomirov (NMNHS); between Mikrevo and Kamenitsa, in leaf litter, 170 m, 07.07.2006, 6 ♂♂; 10.08.2006, 2 ♂♂; **Pirin Mts.**, Ilindentsi, in leaf litter, 300 m, 05.06.2006, 3 ♂♂, 7 ♀♀; 09.07.2006, 20 ♂♂, 12 ♀♀; 08.09.2006, 1 ♂, 2 ♀♀; near Kalimantsi, Malinova barchina, 350 m, in leaf litter, 01.04.2007, 6 ♂♂, 7 ♀♀, leg. R. Bekchiev (PCRB); **Petrich District**, Rupite, in rotten wood of *Populus* sp., 90 m, 07.05.2004, 2 ♂♂; **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 04.09.2006, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Albania, Bulgaria, Greece and Macedonia. Balkan species.

***Bryaxis roumaniae* Raffray, 1904**

German (RAMBOUSEK, 1909), Vratsa, Burgas (KARAMAN, 1972a), Belasitsa Mts., near Belasitsa Hut (LAPEVA-GJONOVA, 2004), Vitoshka Mts. (BEKCHIEV & SHISHINIOVA, 2007).



New localities: **Rila Mts.**, Parangalitsa Reserve, in leaf litter of *F. sylvatica*/*P. abies*, 1500 m, 23.11.2003, 1 ♀, leg. A. Gjonova (PCRB); **Malashevaska Mts.**, Gorna Breznitsa, pitfall trap, 700 m, 23.08 – 25.09.2002, 1 ♂; Nikudin, pitfall trap, 15.03 – 16.04.2003, 1 ♂, leg. B. Guéorguiev (NMNHS); **Petrich District**, Rupite, Pchelina hill, 71 m, 09.08.2006, 6 ♂♂, 8 ♀♀; bank of Sruma River, in leaf litter, 06.09.2006, 2 ♂♂; **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 14.04.2006, 4 ♂♂, 4 ♀♀; 02.06.2006, 1 ♀; 04.09.2006, 3 ♂♂, 1 ♀; Samuilovo, in leaf litter, 300 m, 15.04.2005, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Bulgaria, Greece, Montenegro, Romania and Serbia. Balkan species.

### ***Bryaxis beroni* Karaman, 1969**

“Ječa Dupka, Shandalovo bei Kjustendil” = Mechata Dupka Cave, Stradalovo, Kustendil District (KARAMAN, 1972a).

Distribution: Bulgaria and Serbia. Balkan endemic species

### **\**Bryaxis dalmatinus* (Reitter, 1881)**

**Malashevaska Mts.**, Sedelets, pitfall trap in *Quercus* sp. forest, 680 m, 04.07 – 08.08.2003, 1 ♂, leg. T. Ljubomirov (NMNHS); between Mikrevo and Kamenitsa, in leaf litter, 170 m, N 41°38'569" E 23°10'167", 07.07.2006, 10 ♂♂; 10.08.2006, 3 ♂♂, leg. R. Bekchiev (PCRB); **Pirin Mts.**, near Kalimantsi, St. Ilya hill, 500 m, MSS trap, 27.06 – 07.12.2006, 1 ♂, leg. S. Lazarov (NMNHS); **Petrich District**, Rupite, Kozhuh hill, under stone, 195 m, N 41°27'632" E 23°15'351", 15.04.2006, 1 ♂, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: Albania, Bosnia and Herzegovina, Crete, Greece, Macedonia, Montenegro and Serbia. Balkan species.

### **\**Bryaxis sarplaninensis* (Karaman, 1953)**

**Belasitsa Mts.**, near Belasitsa Hut, Vodopada, 700 m, 04. 05. 2003, 1 ♂ leg. P. Mitov (MHNG); Kamena, bank of little river, in leaf litter of *Platanus orientalis*, 400 m, 15.04.2006, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Macedonia, Serbia – Kosovo. Balkan endemic species.

### ***Bryaxis islamitus* (Reitter, 1885)**

Lyulin Mts., Vladaya gorge (DRENOVSKI, 1942).

New localities: **Vitosha Mts.**, 1500 m, 25.07.1972, 1 ♂, leg. Rous (PCVB); Byala Voda, in leaf litter of *F. sylvatica*/*Salix* sp., 900 m, 28.04.2005, 2 ♂♂; 17.05.2005, 3 ♂♂; 23.06. 2005, 2 ♂♂; 21.07.2005, 1 ♂; 13.05.2006, 1 ♂; 26.06.2006, 1 ♂; above Knyazhevo, in leaf litter, 13.05.2005, 1 ♂; 30.06.2005, 3 ♂♂; 26.07.2005, 1 ♂, 1 ♀; 13.05.2006, 2 ♂♂, 1 ♀; 14.07.2006, 3 ♂♂; Kladnitsa, bank of Kladnishka reka River, in leaf litter, 1100 m, 24.05.2005, 1 ♂; above Dragalevtsi, in leaf litter, 1000 m, 31.08.2005, 1 ♂; above Rudartsi, in leaf litter, 1000 m, 12.09.2006, 1 ♂, 6 ♀♀; 25.07.2006, 2 ♂♂; Marchaevo, in leaf litter, 1000 m, 25.04.2006, 1 ♂; **Konyavska Mts.**, near Dvorishte, in leaf litter *Quercus* sp., 02.07.2005, 1 ♂, leg. R. Bekchiev (PCRB); **Pirin Mts.**, Gotse Deltshev District, Musomishte, in leaf litter, 600 m, 12.06.1989, 1 ♂, leg. C. Besuchet (MHNG); **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 14.04.2006, 7 ♂♂, 3 ♀♀; 06.07.2006, 1 ♂, 1 ♀; 04.09.2006, 5 ♂♂, 3 ♀♀; Kamena, in leaf litter, 430 m, 14.04.2006, 3 ♂♂; Samuilovo, in leaf litter, 300 m, 15.04.2005, 2 ♂♂, 5 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: the species is so far known from Bosnia Herzegovina, Bulgaria, Greece, Macedonia, Montenegro and Serbia. Balkan species.

Note: The species is widely distributed on the Balkans, but its aedeagus (Fig. 2 and 3) and antennal base (Fig. 4) have never been illustrated. We use the opportunity to correct that omission.

***Bryaxis bulbifer* (Reichenbach, 1816)**

Varna – Varna Lake, Kamchia River (KARAMAN, 1969).

New localities: **Vitosha Mts.**, Zheleznitsa, in boggy meadow, 1200 m, 24.03.2007, 4 ♂♂, 7 ♀♀, leg. R. Bekchiev (PCRB); **Konyavska Mts.**, near Choklyovo marsh, in leaf litter of *Salix* sp., 12.05.2005, 1 ♂, leg. P. Mitov (PCRB); **Sandanski**, 6-11.05.1984, 1 ♂, leg. Wrase (MHNG); **Petrich District**, Rupite, near Struma River, pitfall trap, 20.04 – 20.05.1996, 1 ♂, leg. B. Gueorguiev (NMNHS); near Struma River, under fallen bulrush, 90 m, 08.08.2006, 7 ♂♂, 2 ♀♀; 05.09.2006, 9 ♂♂, 2 ♀♀, leg. R. Bekchiev (PCRB); near General Todorov, 04.05.1984, 1 ♂, leg. Hieke (ZMHB).

Distribution: entire Europe, Asia (Russia – East and West Siberia, Turkey). European-Siberian species.

***Bryaxis ullrichii* Motschulsky, 1851**

Vitosha Mts. (RAMBOUSEK, 1909; BEKCHIEV & SHISHINIOVA, 2007).

**Vitosha Mts.**, in leaf litter of *F. sylvatica*, 10.08.1943, 1 ♂ (NMNHS).

Distribution: Southeast and Central Europe. Southeast European species.

***Bryaxis longulus* Kiesenwetter, 1849**

German (RAMBOUSEK, 1909).

Note: The presence of this species in Bulgaria needs confirmation.

***Bryaxis nodicornis* Aubé, 1833**

German (RAMBOUSEK, 1909), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

Distribution: entire Europe. European species.

***Bythinus acutangulus lunifer* Karaman, 1948**

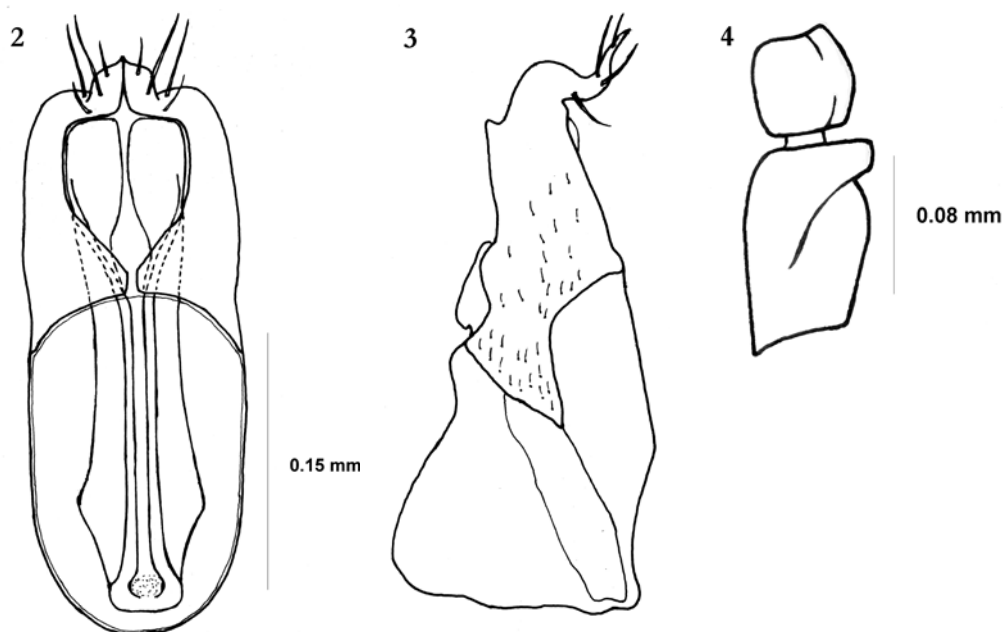
Rila Mts. - Samokov, Rhodopes Mts. - Bachkovo (KARAMAN, 1957, 1969), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Pirin Mts.**, Ilindentsi, in leaf litter, 300 m, 05.06.2006, 2 ♂♂; 08.09.2006, 3 ♂♂; **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 14.04.2006, 9 ♂♂, 6 ♀♀; 07.07.2006, 4 ♂♂, 2 ♀♀; 08.08.2006, 2 ♂♂, 3 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: The subspecies is so far known only from Bulgaria. Bulgarian endemic subspecies.

**\**Bythinus acutangulus skopljensis* (Karaman, 1948)**

**Petrich District**, Rupite, Kozhuh hill, 10.06.1983, at light, 6 ♂♂, leg. Hieke (ZMHB); bank of Struma River, in reed leaf litter, 94 m, 10.04.2005, 4 ♂♂; 03.06.2006, 2 ♂♂, 2 ♀♀; 08.08.2006, 3 ♂♂, 1 ♀; 06.09.2006, 3 ♂♂, leg. R. Bekchiev (PCRB).



Figs. 2-4. *Bryaxius islamitus*. 2 – aedeagus, dorsal view; 3 – same, lateral view; 4 – base of antenna.

Distribution: Bosnia Herzegovina and Macedonia. Balkan endemic subspecies.

**\**Bythinus mariovi* Karaman, 1969**

**Pirin Mts.**, Gotse Deltshev District, Musomishte, in leaf litter, 600 m, 12.06.1989, 1 ♂, 1 ♀, leg. C. Besuchet (MHNG).

Distribution: The species is so far known only from Macedonia. Balkan species.

***Bythinus lunicornis* Reitter, 1884**

Rila Mts. - Borovets, Samokov (KARAMAN, 1954, 1957, 1969), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Rila Mts.**, Borovets mountain resort, 1911, 1 ♂; Samokov, 1911, 1 ♂, leg. Biro; Samokov, 1911, 1 ♂, 1 ♀, leg. M. Hilf (MHNG); **Malashevaska Mts.**, Breznitsa, pitfall trap in *P. orientalis* forest, 14.09-02.10.2003, 1 ♂, leg. B. Guéorguiev (NMNHS).

Distribution: Bosnia and Herzegovina, Bulgaria, Crete, Greece, Hungary, Macedonia, Montenegro, Romania and Serbia. Southeast European species.

**\**Bythinus macropalpus* Aubé, 1833**

**Zemen gorge**, near Zemen, bank of Struma River, in leaf litter of *Salix* sp., 570 m, 02.05.2004, 1 ♂, leg. R. Bekchiev (PCRB); **Petrich District**, Rupite, Kozhuh hill, 10.06.1983, at light, 1 ♂, leg. Hieke (MHNG).

Distribution: entire Europe and Asia (East Siberia). European-Siberian species.

***Bythinus leonhardinus* Reitter, 1882**

Samokov (KARAMAN, 1957, 1954), Pirin Mts. – Smokovo (LÖBL, 1969), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Kresna gorge**, near Stara Kresna, bank of Struma River, in leaf litter, 05.06.2006, 3 ♂♂; 09.09.2006, Sheitan Dere, in leaf litter, 2 ♂♂, 9 ♀♀, leg. R. Bekchiev (PCRB); **Rila Mts.**, Samokov, 1911, 1 ♂, leg. Biro (MHNG); **Pirin Mts.**, Ilindentsi, in leaf litter, 300 m, 05.06.2006, 9 ♂♂, 56 ♀♀; 09.07.2006, 38 ♂♂, 107 ♀♀; 08.09.2006, 12 ♂♂, 35 ♀♀, leg. R. Bekchiev (PCRB); **Sandanski**, 28.08.1972, 1 ♂, leg. A. Sanglet (MHNG); **Malashevskia Mts.**, Gorna Breznitsa, pitfall trap, 01.06 – 20.07.2003, 1 ♂, leg. B. Gueorgiev (NMNHS); between Mikrevo and Kamenitsa, in leaf litter, 150 m, 03.06.2006, 2 ♂♂; 07.07.2006, 5 ♂♂, 13 ♀♀; 09.08.2006, 6 ♂♂, 8 ♀♀, leg. R. Bekchiev; **Petrich District**, Rupite, bank of Struma River, in reed leaf litter, 94 m, 06.09.2006, 3 ♂♂; **Belasitsa Mts.**, Klyuch, in leaf litter, 500 m, 14.04.2006, 3 ♂♂, 2 ♀♀; Kamena, in leaf litter, 430 m, 14.04.2006, 2 ♂♂; Samuilovo, in leaf litter, 300 m, 15.04.2005, 2 ♂♂, 8 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Bulgaria, Greece and Macedonia. Balkan species.

***Bythinus seidli* Karaman, 1952**

Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

Distribution: Bulgaria, Montenegro, Romania and Serbia. Balkan species.

***Bythinus burellii* Denny, 1825**

German, Pancharevo (RAMBOUSEK, 1909).

Note: The presence of this species in Bulgaria needs confirmation.

***Bythinus securiger* Reichenbach, 1816**

German (RAMBOUSEK, 1909).

Note: The presence of this species in Bulgaria needs confirmation.

***Paratychnus mendax* (Kiesenwetter, 1858)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Petrich District**, Rupite, Kozhuh hill, 10.06.1983, at light, 1 ♀, leg. Hieke (ZMHB); in leaf litter of *Quercus* sp., 31.03.2007, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Albania, Bulgaria, Cyprus, Greece, Macedonia and Turkey. Balkan species.

***Tychus dalmatinus* (Reitter, 1880)**

Varna – Varna Lake, Kamchia River (KARAMAN, 1969), Kranevo (HLAVÁČ 1997).

New localities: **Petrich District**, Rupite, Kozhuh hill 10.06.1983, at light, 5 ♂♂; near General Todorov, 06.05.1984, 3 ♂♂, leg. Hieke (ZMHB).

Distribution: Southeast and Central Europe. Southeast European species.

***Tychus aphelbecki* Karaman, 1955**

Bulgaria (LÖBL & BESUCHET, 2004).

**Pirin Mts.**, near Gospodintsi, 585 m, MSS - trap, 07.09.2006 – 04.07.2007, 1 ♂, 1 ♀, leg. P. Stoev (NMNHS).

Distribution: Bosnia Herzegovina, Bulgaria, Croatia, Greece, Montenegro, Serbia, Turkey. Balkan-Anatolian species.

***Tychus anatolicus* Besuchet, 1964**

Bulgaria (LÖBL & BESUCHET, 2004).

**Petrich District**, Rupite, Kozhuh hill, 10.06.1983, at light, 10 ♂♂, 8 ♀♀, leg. Hieke (ZMHB); Rupite, under fallen bulrush, 94 m, 09.08.2006, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Bulgaria, Greece, Russia – the Caucasus, Ukraine – Crimea and Turkey. Pontic species.

***Tychus niger* (Paykull, 1800)**

German (RAMBOUSEK, 1909), Razgrad (MARKOVITICH, 1909), Rila Mts. – Samokov (KARAMAN, 1955), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Petrich District**, near General Todorov, 06.05.1984, 1 ♂, leg. Hieke (MHNG); **Pernik District**, Kovachevtsi, bank of Pchelina dam lake, in moss, 550 m, 17.04.2005, 1 ♂, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: entire Europe. European species.

***Tychus rufus* Motschulsky, 1851**

Vitosha Mts. (RAMBOUSEK, 1909; BEKCHIEV & SHISHINIOVA, 2007), Varna, Burgas – Banya, Sozopol, Shumen (KARAMAN 1969, 1972a, 1972b).

New localities: **Pernik District**, Kovachevtsi, bank of Pchelina dam lake, in moss, 550 m, 17.04.2005, 5 ♀♀, leg. R. Bekchiev (PCRB); **Rila Mts.**, Rila Monastery, 11.07.1957, 1 ♂, leg. N. Karnoschitzky (NMNHS).

Distribution: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Hungary, Montenegro, Italy, Romania, Serbia and Slovenia. Southeast European species.

**\**Tychus laminiger* Besuchet, 1969**

**Petrich District**, Rupite, Kozhuh hill, 10.06.1983, at light, 1 ♂, leg. Hieke (ZMHB).

Distribution: Greece, Ukraine – Crimea, Israel, Turkey. Ponto-Mediterranean species.

**\**Tychus cordiger* Besuchet, 1969**

**Petrich District**, Rupite, Kozhuh hill, under stone, 16.03.2003, 1 ♂, leg. R. Bekchiev (PCRB).

Distribution: Bosnia and Herzegovina, Croatia, Greece, Macedonia, Montenegro, Serbia and Turkey. Balkan species.

***Tychus pullus* Kiesenwetter, 1858**

Varna (KARAMAN, 1969).

New localities: **Rila Mts.**, Rila Monastery, 11.07.1957, 1 ♂, leg. N. Karnoschitzky (NMNHS).

Distribution: Albania, Bosnia Herzegovina, Bulgaria, Croatia, Greece, Hungary, Italy, Montenegro, Serbia, Slovenia, Slovakia and Turkey. Southeast European species.

***Brachygluta fossulata* (Reichenbach, 1816)**

German (RAMBOUSEK, 1909), Tarnovo (NETOLITZKY, 1912), Sofia, Maglizhe, (KARAMAN, 1961), Vitosha Mts. (BEKCHIEV & SHISHINIOVA, 2007).

Distribution: entire Europe, Asia (Russia – East and West Siberia, Turkey). European-Siberian species.

***Brachygluta sinuata* (Aubé, 1833)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Sandanski District**, Strumyani, 15.06.1995, 1 ♂, leg. Prudek (PCPH).

Distribution: entire Europe, North Africa (Algeria). European-Mediterranean species.

***Brachygluta helferi longispina* (Reitter, 1884)**

Varna – Varna lake, Kamchia River (KARAMAN, 1969, 1972a).

New localities: **Petrich District**, Rupite, Kozhuh hill, 8-10.06.1983, at light, 4 ♂♂, leg. Hieke (ZMHB).

Distribution: Europe, Asia (Cyprus, Iran, Israel, Lebanon, Syria, Turkey). European-Mediterranean species

***Brachygluta haematica* (Reichenbach, 1816)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Petrich District**, Rupite, Kozhuh hill, 8-10.06.1983, at light, 2 ♂♂, 3 ♀♀, leg. Hieke (ZMHB).

Distribution: entire Europe, Asia (Russia – East and West Siberia). European-Siberian species.

***Brachygluta spinicoxis fuchsii* (Paganetti-Hummler, 1899)**

Tryavna (KARAMAN, 1961).

New localities: **Kyustendil**, 1928, 1 ♂, leg. Biro (HNHM); **Pirin Mts.**, Dobrinishte, 1966, leg. Löbl (SNHM).

Distribution: Albania, Bulgaria, Crete, Greece, Montenegro, Serbia and Turkey. Balkan subspecies.

***Brachygluta paludosa* (Peyron, 1858)**

German (RAMBOUSEK, 1909).

Note: The species is halophilous and its finding in the neighbourhood of German Village is suspicious.

**\*\**Reichenbachia juncorum* (Leach, 1817)**

**Vitosha Mts.**, Zheleznița, in boggy meadow, 1200 m, 21.01.2007, 2 ♂♂, 2 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Europe and North Africa (Algeria, Morocco, Tunisia). European-Mediterranean species.

***Rybaxis longicornis* (Leach, 1817)**

Varna – Varna Lake, Kamchia River (KARAMAN, 1969, 1972a).

New localities: **Petrich District**, Rupite, Kozhuh hill, 10.06.1983, at light, 1 ♂, leg. Hieke (ZMHB).

Distribution: Common species, known from Europe, North Africa (Algeria, Morocco, Tunisia) and Asia (Afghanistan, Russia- east Siberia, Iran, Iraq, Tadjhikistan, Turkmenistan, Turkey, Uzbekistan). Trans-Palaeartic species.

***Trissemus atennatus serricornis* (Shmidt-Göbel, 1838)**

Svilengrad (VŠETEČKA, 1959), Varna – Varna lake, Kamchia River (KARAMAN, 1969, 1972a).

New localities: **Malashevska Mts.**, between Mikrevo and Kamenitsa, in leaf litter, 150 m, 07.07.2006, 1 ♀; 06.09.2006, 2 ♀♀; **Pirin Mts.**, Ilindentsi, in leaf litter, 300 m, 08.09.2006, 1 ♂, leg. R. Bekchiev; 30.07.2007, at light, 10 ♂♂, leg. B. Zlatkov & O.Sivilov (PCRB); **Rila Mts.**, place Bachinovo, bank of Rilska Bistritsa river, pitfall trap, 19.06.2006, 2 ♂♂, 2 ♀♀, leg. L. Sekerelieva (NMNHS); **Sandanski**, 16 – 23.07.1985, 1 ♂, leg. M. Schülke; 6 – 11 05.1969, 1 ♂, leg. Wrase (ZMHB); **Petrich District**, Rupite, near Struma River, pitfall trap, 20.04 – 20.05.1996, 8 ♂♂, 15 ♀♀, leg. B. Gueorguiev (NMNHS); near General Todorov, 06.05.1984, 1 ♂, leg. Hieke (ZMHB); Rupite, near Struma River, in leaf litter, 94 m, 10.04.2005, 1 ♂; under fallen bulrush, 90 m, 08.08.2006, 14 ♂♂, 7 ♀♀; 05.09.2006, 9 ♂♂, 7 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Europe (Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Germany, Georgia, Greece, Hungary, Montenegro, Serbia, Slovenia, Russia – South European territory, Asia (Turkey). Southeast European subspecies.

***Trissemus montanus* (Saulcy, 1876)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Petrich District**, Rupite, near Struma River, pitfall trap, 20.04 – 20.05.1996, 2 ♀♀, leg. B. Guéorguiev (NMNHS); under fallen bulrush, 90 m, 08.08.2006, 5 ♂♂, 3 ♀♀; 05.09.2006, 3 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Azerbaijan, Armenia, Bulgaria, Georgia, Greece, Iran, Turkmenistan and Turkey. Mediterranean-Turanian species.

***Centrotoma lucifuga* Hayden, 1849**

Gotse Delchev District, Petrelik (LAPEVA-GJONOVA, 2004)

Distribution: Southeast and Central Europe. Southeast European species.

***Ctenistes palpalis* Reichenbach, 1816**

Rila Mts. - Rila Monastery (KARAMAN, 1969)

New localities: **Pirin Mts.**, Ilindentsi, in leaf litter, 300 m, N 41°38'747" E 23°13'558", 08.09.2006, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: entire Europe, Central Asia, Oriental region. Palaeartic-Palaeotropical species.

***Dicentrius fodori* Besuchet, 1999**

Rila Mts. - Borovets, Maliovitsa Hut, Pirin Mts. – Vihren (RAMBOUSEK, 1909; BESUCHET, 1999).

New localities: **Rila Mts.**, Borovets, 08.08.1909, 1 ♂, leg. Rambousek (NMNHS); Parangalitsa Reserve, in leaf litter of *F. sylvatica*/*P. abies*, 1500 m, 23.11.2003, 1 ♂, 3 ♀♀, leg. A. Gjonova (PCRB).

Distribution: Bosnia and Herzegovina and Bulgaria. Balkan endemic species.

***Dicentrius balcanicus pirinensis* Besuchet, 1999**

Pirin Mts. – Banderitsa, Pirin Hut, Rila Mts. – Borovets, Blagoevgrad (BESUCHET, 1999).

Distribution: The subspecies is so far known only from Bulgaria. Bulgarian endemic subspecies.

***Dicentrius biroi* Besuchet, 1999**

Osogovo Mts., on the border between Bulgaria and Macedonia (BESUCHET, 1999).

Note: The species is so far known from Bulgaria and Macedonia. Balkan endemic species.

***Dicentrius discrepans* Besuchet, 1999**

Pirin Mts., Banderitsa (BESUCHET, 1999).

Distribution: The species is so far known only from Bulgaria. Bulgarian endemic species.

***Dicentrius rousi* Besuchet, 1999**

Vitosha Mts., (BESUCHET, 1999; BEKCHIEV & SHISHINIOVA, 2007).

New localities: **Vitosha Mts.**, in leaf litter *F. sylvatica*, 08.1943, 5 ♂♂, 2 ♀♀ (NMNHS).

Distribution: The species is so far known only from Bulgaria. Bulgarian endemic species.

***Dicentrius zerchei* Besuchet, 1999**

Rila Mts. - Borovets, Belmeken, Pirin Mts.- Vihren (BESUCHET, 1999).

Distribution: The species is so far known only from Bulgaria. Bulgarian endemic species.

***Pselaphogenius bulgaricus* Löbl, 1969**

Pirin Mts. – Smokovo (LÖBL, 1969).

New localities: **Osogovo Mts.**, 1928, 2 ♂♂, 1 ♀, leg. Biro (MHNG); **Karvav Kamak Mts.**, west of Dragojchinovtsi, in leaf litter of *F. sylvatica*, 850 m, N 42°35'19" E 22°32'31", 04.05.2001, 1 ♂, leg. Zerche & Behne (DEI); **Rila Mts.**, Bistritsa, in leaf litter of *F. sylvatica*, 780 m, N 42°02'38" E 23°13'31", 19.06.1997, 1 ♂, 1 ♀, leg. Zerche & Behne (DEI); **Malashevskia Planina Mts.**, Gorna Breznitsa, in leaf litter of *F. sylvatica*, 885 m, N 41°44'31" E 23°04'27", 30.04.2001, 2 ♂♂, 1 ♀, leg. Behne (DEI); pitfall trap in *P. orientalis* forest, 15.06 – 10.07.2002, 1 ♂; 11.07 – 23.08.2002, 1 ♀; 01.05 – 19.06.2003, 1 ♂, 1 ♀, leg. B. Guéorguiev (NMNHS); **Belasitsa Mts.**, 700 m, 17.10.1982, 1 ♀, leg. H. Delchev (MHNG), Belasitsa Hut, in leaf litter of *F. sylvatica*/*C. sativa*, 720 m, 5.05.2000, 1 ♂, 1 ♀; 4.05.2000, 1 ♀, leg. Behne (DEI); Yavornitsa, 400 m, 01 – 03.05.2003, 1 ♂, leg. P. Mitov; Samuilovo, in leaf litter, 300 m, 15.04.2005, 1 ♀, leg. R. Bekchiev (PCRB).



Distribution: The species is so far known from Bulgaria, Greece and Macedonia. Balkan endemic species.

***Pselaphaulax dresdensis dresdensis* (Herbst, 1792)**

Bulgaria (LÖBL & BESUCHET, 2004).

**Petrich District**, Rupite, Kozhuh hill, 10.06.1983, at light, 1 ♀, leg. Hieke (MHNG).

Distribution: entire Europe. European species.

***Pselaphus heisei* Herbst, 1792**

Varna, Kamchia River, Vidin (KARAMAN, 1969, 1972a).

New localities: **Vitosha Mts.**, near Zheleznitsa, in fern litter, 1200 m, 15.05.2005, 1 ♂; under stone, 21.05.2006, 3 ♂♂, 1 ♀; **Pernik District**, Kovachevtsi, bank of Pchelina dam lake, in moss, 550 m, 17.04.2005, 1 ♀, leg. R. Bekchiev (PCRB).

Distribution: entire Europe, Asia (Russia – Far East, West and East Siberia). European-Siberian species.

**\**Pselaphus caucasicus* Motschulsky, 1845**

**Rila Mts.**, Bachinovo, bank of Rilska Bistritsa River, pitfall trap, 19.06.2006, 3 ♂♂, 1 ♀, leg. L. Sekerelieva (NMNHS); **Sandanski**, 13-24.07.1985, 2 ♂♂, leg. Shülke (ZMHB); **Petrich District**, Rupite, near Struma River, under fallen bulrush, 90 m, N 41°28'138" E 23°16'176", 08.08.2006, 17 ♂♂, 9 ♀♀; 05.09.2006, 8 ♂♂, 4 ♀♀, leg. R. Bekchiev (PCRB).

Distribution: Azerbaijan, Armenia, Georgia, Greece, Macedonia, Montenegro, Serbia and Turkey. Ponto-Mediterranean species.

## Conclusions

As a result of this study, 85 species of Pselaphinae are established in Southwestern Bulgaria. The genera *Faronus* and *Reichenbachia*, 17 species and one subspecies are new to the Bulgarian fauna. Here the 14 species included in “Catalogue of the Palearctic Coleoptera” (LÖBL & BESUCHET, 2004) are reported for the first time with detailed information for the records (date, place, etc.). For the first time information about other 8 species in the region is reported, at the same time the knowledge about the local distribution of Pselaphinae is considerably bigger. Data about Sandanski – Petrich Valley (31 species), Belasitsa Mts. (15 species), Malashevska Mts. (12 species) has been given for the first time ever.

Thanks to the species diversity and the variety of habitats, Pselaphinae is a group with good potential for zoogeographical studies (NEWTON & CHANDLER, 1989). However, at this stage, specific analysis of the data is hindered by the fact that the general distribution and origin of many species is not sufficiently clear.

Despite the fairly limited amount of data and the lack of systematic investigations for a significant part of the territory of Southwest Bulgaria, the results obtained allow for analysis of some major trends in the zoogeography of Bulgarian Pselaphinae species (including subspecies) – Table 1. All species whose presence in the fauna of Bulgaria is controversial or not confirmed are excluded from the analysis.

Table 1

**Zoogeographical structure of Pselaphinae fauna in South-West Bulgaria**

Zoogeographical element	Number of species
Cosmopolitan	1
Palearctic-Palaeotropical	1
Transpalearctic	1
European-Siberian	11
European-Turanian	1
European	11
Central-South European	1
Southeast European	12
Carpathian-Balkan	1
European-Mediterranean	5
Mediterranean	1
Ponto-Mediterranean	3
Pontic	2
Mediterranean-Turanian	1
Balkan	15
Balkan-Anatolian	1
Balkan endemic	6
Bulgarian endemic	5

The largest percentage of species (34 %) belongs to the Balkan zoogeographical complex - Balkan, Balkan-Anatolian, Balkan endemic, Bulgarian endemic categories, followed by the European species (32 %) – European, Southeast European and Carpathian-Balkan categories, the Northern and Western Palearctic species (18 %) – Transpalearctic, European-Siberian, European-Turanian categories, and the Mediterranean species (15%) – European-Mediterranean, Mediterranean, Pontomediterranean, Pontic, Mediterranean-Turanian categories. The prevalence of European and Palearctic species (considered together) is easily explained, having in mind the presence of massive high mountains in the investigated region, which are favourable to these species with their temperatures flexibility and high ecological plasticity. In parts of low altitude in the investigated region (mainly the valley of Sandanski-Petrich – 7 species and 1 subspecies), the number of Mediterranean species increases significantly. These results are easily explained by the fact that the valley of Sandanski-Petrich is situated within the range of the transitional Mediterranean climatic region, and the number of Mediterranean elements decreases north of the Kresna Gorge and towards the elevated parts of the mountains (GRUEV, 1988). The number of Balkan species is high and a major portion of them can be also considered as endemites; this applies especially to the pselaphids belonging to tribus Bythinini, in which many species have a fairly limited areal (KARAMAN, 1957). Only some species from the genus *Dicentrius* can be considered as typically Bulgarian endemites.

Even though the species listed in this article represent a considerably large percentage (70 %) of the ones reported for Bulgaria (LÖBL, BESUCHET, 2004), a significant increase in the number of species can be expected if a thorough investigation of Rila Mts., Pirin Mts., the mountains along the border and the valleys of Struma River and Mesta River is performed.

Additional thorough investigations of the territory of Bulgaria, as well as on the Balkan Peninsula, need to be performed in order to accomplish a comprehensive zoogeographical description.

### Acknowledgements

I would like to express my sincere gratitude to Dr. C. Besuchet, Mr. P. Hlaváč, Dr. B. Guéorguiev and Dr. P. Stoev for the data and material that they kindly provided. Part of material was collected with funding from the National Science Fund projects B-MU-1101/01 “Arachnoentomological investigations in forest ecosystems of Maleshevska planina” and B-1523/05 “First investigation of the “milieu souterrain superficiel” (MSS) in Bulgaria” to Dr. B. Guéorguiev and Dr. P. Stoev, respectively.

### References

- BESUCHET C. 1955. Monographie des *Biblopectus* et *Pseudoplectus* paléarctiques (Col. Pselaphidae). – Mitteilungen der schweizerischen entomologischen Gesellschaft, **28** (2): 153-209.
- BESUCHET C. 1999. Le genre *Dicentrius* (Coleoptera, Staphylinidae, Pselaphidae). – Mitteilungen der schweizerischen entomologischen Gesellschaft, **72**: 221-233.
- BEKCHIEV R., SHISHINIOVA M. 2007. A Contribution to the Pselaphinae Fauna (Coleoptera: Staphylinidae) of the Vitosha Mountain. – Acta zoologica bulgarica, **59** (1): 33-39.
- DRENOVSKI K. 1942. Vierter Beitrag zum Insektenfauna Bulgariens und Macedoniens (Apteryogena und Käfer). – Mitteilungen der Bulgarischen Entomologischen Gesellschaft in Sofia., **12**: 1-14. (In Bulgarian with German abstract).
- HLAVÁČ P. 1997. The first record of *Tychus dalmatinus dalmatinus* Reitter, 1880 for Slovakia (Coleoptera: Staphylinidae: Pselaphinae). – Klapalekiana., **33** (1-2): 7-9.
- GRUEV B. 1988. General Biogeography. Nauka i izkustvo, Sofia, 396 pp. (In Bulgarian).
- KARAMAN Z. 1954. Über einige neue Coleopteren der Balkanfauna. – Fragmenta balcanica, **1** (6): 45-55.
- KARAMAN Z. 1955. Revision des Tribus Tychini (Col. Psel.) mit besonderer Berücksichtigung der balkanischen Arten. – Acta Musei Macedonici Scientarum Naturalium, **3** (4): 105-144.
- KARAMAN Z. 1957. Die balkanischen Bythininen (Col. Pselaphidae). Ihre Systematik, Zoogeographie und Phylogenie. – Bioloski Glasnik (Periodicum biologorum), **10** (3-4): 161-208.
- KARAMAN Z. 1961. Neue Gruppierung der Arten des Genus *Brachygluta* Thomson (Coleoptera Pselaphidae). – Acta Musei Macedonici Scientarum Naturalium, **7** (7): 127-174.
- KARAMAN Z. 1962. Über das Genus *Plectophloeus* Reitter (Euplectini Psel. Col.). – Jahrbuch der Land- und Forstwirtschaftlichen Fakultät der Universität in Skopje., **15**: 145-153. (In Serbo-Croatian with German abstract).

- KARAMAN Z. 1967. Revision der Gattung *Trimium* Aubé (Coll. Pselph.). – Acta Musei Macedonici Scientiarum Naturalium, **10** (6): 131-173.
- KARAMAN Z. 1969. Über einige neue und interessante Pselaphiden Vertreter der Balkanhalbinsel. – Fragmenta balcanica., **7** (3): 9-20.
- KARAMAN Z. 1972a. Vier balkanische und eine italienische neue Pselaphiden Arten. – Fragmenta balcanica., **9** (4): 37-51.
- KARAMAN Z. 1972b. Neue *Tychus* Arten der Balkanhalbinsel (Col. Pselaphidae). – Nouvelle Revue d'Entomologie, **2** (1): 73-78.
- LAPEVA-GJONOVA A. 2004. Pselaphinae (Col. Staphylinidae) from ant nest (Hym. Formicidae) in southwestern Bulgaria. – Acta zoologica bulgarica, **56** (1): 67 – 73.
- LÖBL I. 1969. Beitrag zur Kenntnis der Pselaphiden Bulgariens. – Koleopterologische Rundschau, **46-47**: 13-15.
- LÖBL I., BESUCHET C. 2004. Pselaphinae. – In: Löbl I., Smetana A. (eds.). Catalogue of the Palearctic Coleoptera, Vol. 2: Hydrophiloidea - Histeroidea - Staphylinoidea, Steenstrup, Apollo Books, 272-329.
- MARKOVICH A. 1909. [Contribution for insect fauna in the neighborhood of Razgrad Town]. – Sbornik za umotvorenia, nauka i knizhnina, Sofia, **25**: 3-20. (In Bulgarian).
- NETOLITZKY F. 1912. Eine Sammelreise nach Bulgarien. - Koleopterologische Rundschau, Bd. **1**: 156-163.
- NEWTON A.F., JR. & CHANDLER D.S. 1989. World Catalog of the Genera of Pselaphidae (Coleoptera). Fieldiana, Zoology (N.S.), **53**: 93 p.
- NIKOLOV V., JORDANOVA M. 2002. The mountains in Bulgaria. Prof Marin Drinov Academic Publishing House, Sofia, 266 pp. (in Bulgarian with English abstract).
- RAMBOUSEK J. 1909. Příspěvek k poznání bulharských Pselaphidů a Scydmaenidů. – Časopis československé společnosti entomologické., **6**: 16-24.
- REITTER E. 1880. Beitrag zur Kenntnis europäischen Pselaphidae und Scydmaenidae. – Verhandlungen der Zoologische-Botanischen Gesellschaft in Wien, **29**: 533-542.
- VŠETEČKA K. 1959. Wissenschaftliche Ergebnisse der zoologischen Expedition des National museums in Prag nach der Türkei (Coleoptera: Pselaphidae, Scydmaenidae). – Acta entomologica nationalis Pragae, **550**: 327-331.

Received: 19.06.2007

Author's address:

Rostislav Bekchiev, Department of Zoology and Anthropology, Faculty of Biology, Sofia University, Dragan Tsankov Blvd. 8, 1164 Sofia, Bulgaria, e-mail: rbekchiev@gmail.com

## Подсемейство Pselaphinae (Coleoptera: Staphylinidae) на Югозападна България. I

Ростислав БЕКЧИЕВ

(Резюме)

Настоящата работа има за цел да обобщи наличните данни за подсемейство Pselaphinae в Югозападна България. Включени са всички литературни и непубликувани данни от различни европейски природонаучни музеи и частни колекции. Резултатите са допълнени и от изследванията на автора, проведени в периода 2003-2007 година. Досега в Югозападна България са установени общо 85 вида от подсемейство Pselaphinae (без представителите на супертрибусите *Batrisitae* и *Clavigeritae*, които ще бъдат обект на отделна публикация). Родовете *Faronus* и *Reichenbachia*, 17 вида и един подвид са нови за фауната на България. В "Catalogue of the Palearctic Coleoptera" LÖBL & BESUCHET (2004) съобщават 14 вида за България, без да споменават точните им находища. Тук за първи път се публикуват конкретни данни за тях. Осем вида са нови за изследвания регион. За първи път се публикуват данни за Санданско-Петричката котловина (31 вида), Беласица (15 вида) и Малашевска планина (12 вида). Най-голям процент от видовете (34 %) принадлежат към Балканския зоогеографски комплекс, следвани от Европейския (32 %) Северно и Западно палеарктичния (18 %) и Медитеранския комплекс (15 %). Въпреки че изброените видове представляват сравнително голям процент (70 %) от съобщените за България (LÖBL & BESUCHET, 2004), може да се очаква значително увеличаване на техния брой при системно изследване на Рила, Пирин, пограничните планини, както и на котловините на р. Струма и р. Места.